

Environmental Review Committee Draft

MAXWELL FARMS REGIONAL PARK MASTER PLAN UPDATE

Initial Study/Mitigated Negative Declaration

Prepared for
Sonoma County Regional Parks
Department

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CHAPTER 1

Project Description

1.1 Introduction

The Sonoma County Regional Parks Department (Regional Parks) proposes to implement the Maxwell Farms Regional Park Master Plan Update Project within unincorporated Sonoma County, California. The proposed Project includes various and substantial improvements to the existing park, including to: vehicular and pedestrian circulation, parking, sports fields, trails, play and picnic areas, and other associated park facilities including new park features such as an off leash dog area, bicycle pump track and pickle ball courts.

This document is an Initial Study/Mitigated Negative Declaration (IS/MND) that analyzes the potential environmental impacts of Project implementation, including those resulting from construction and operation of new park facilities. This IS/MND has been prepared in compliance with Public Resources Code Section 21000 et seq., California Environmental Quality Act (CEQA) of 1970 (as amended), and Title 14, Chapter 3 of the California Code of Regulations (CCR).

In accordance with the CEQA Guidelines, (14 CCR Section 15070), a Mitigated Negative Declaration shall be prepared if the following criteria are met:

- There is no substantial evidence that the project may have a significant effect; or
- Where there may be a potentially significant effect, revisions to the project would avoid or mitigate the effects to a point where clearly no significant effects would occur.

In accordance with Section 15073 of the CEQA Guidelines, this document is being circulated to local, state and federal agencies and to interested organizations and individuals who may wish to review and comment on the report. The draft IS/MND is available on Regional Parks' website <http://sonomacounty.ca.gov/Parks/Planning/Maxwell-Farms-Master-Plan/>. A paper copy is also available for review at Regional Parks' main office at 2300 County Center Drive, Suite 120A, Santa Rosa, California 95403, and Sonoma Valley Regional Library at 755 W. Napa St. Sonoma, California 95467.

Written public comments may be submitted by email to: scott.wilkinson@sonoma-county.org. Alternatively, written comments may be mailed to Sonoma County Regional Parks, attention: Scott Wilkinson, Park Planner II, at 2300 County Center Drive, Suite 120A, Santa Rosa, CA 95403. Comments on the draft IS/MND will be accepted during the 30-day review period, extending from December 11, 2018 and January 11, 2019.

1.2 Project Background

Maxwell Farms Regional Park is an 85-acre park located adjacent to the city of Sonoma, in unincorporated Sonoma County, California (see **Figure 1**). The park is owned and managed by Regional Parks. The park currently features soccer and baseball fields, tennis and volleyball courts, a playground and picnic sites, and approximately 2.5 miles of nature trails along and near Sonoma Creek. Other facilities located inside the park are the Macdougald Skateboard Park and the Valley of the Moon Boys & Girls Club, a 22,000-square-foot building that houses youth-oriented programs emphasizing academic success, healthy lifestyles, and good character and leadership. Visitor parking is available for a fee.

The current master plan for Maxwell Farms Regional Park was adopted in 1986. In the mid-1990s, a Master Plan amendment was completed, which provided for the construction of the Boys and Girls Club, a new baseball field, the skateboard park, and a renovated play area. Regional Parks embarked on the current master plan update process in 2015. Regional Parks has hosted four community meetings since January 2015 to gather community feedback for improvements to Maxwell Farms. **Table 1-1** summarizes these community workshops.

TABLE 1-1
SUMMARY OF COMMUNITY OUTREACH FOR MASTER PLAN

Date & Time	Meeting	Topic(s)
January 14, 2015 6:30 p.m.	Community Workshop #1	Gathered input for “re-visioning” and updating Master Plan.
April 10, 2015 6:00 p.m.	Community Workshop #2	Gathered input for updating Master Plan; released 14-question, bilingual online community survey.
February 17, 2016 6:30 p.m.	Community Workshop #3	Reviewed and discussed community survey results and presented preliminary master plan concepts.
July 12, 2017 7:00 p.m.	Community Workshop #4	Reviewed and discussed Draft Master Plan and environmental review process. Public comment accepted through August 4, 2017.

As the table reflects, the first two meetings were intended to obtain community input regarding park use and improvements. At the second meeting, Regional Parks circulated a 14-question bilingual survey, which was also made available online; more than 300 community members responded. During the third meeting, Regional Parks shared the survey results and presented three preliminary master plan concepts that were developed based upon the community survey responses. At the fourth meeting, Regional Parks unveiled a draft master plan graphic and solicited community feedback. The master plan preliminary concepts and draft master plan were published on Regional Parks’ website. Public comments were accepted orally and in writing at public meetings, and by email and regular mail.

1.3 Project Objectives

The main objectives of the Project are to improve park facilities in a manner that balances the active and passive recreational needs identified by the community, while preserving and enhancing the ecological value of the park’s more natural, undeveloped areas.



Maxwell Farms Regional Park Master Plan Update

Figure 1
Regional Location

1.4 Proposed Project

1.4.1 Project Location

The scope of the Master Plan is limited to Maxwell Farms Regional Park. The park is located at 100 Verano Avenue, Sonoma, CA 95476 (APNs: 127-141-014, 127-141-015, 127-141-017). As shown in **Figure 2**, the park is bounded by Riverside Drive to the west, Verano Avenue to the north, State Route (S.R.) 12 to the east and Ramon Street to the south. Residential properties border the park on its west, north, and south sides; notably the El Verano neighborhood west of Riverside Drive, the Finnish American Home Association Manor Senior Apartments along Old Maple Avenue, and the Sonoma Oaks Mobile Home Park along Ramon Street. The Maxwell Village Shopping Center bounds the property to the southeast. The County's Zoning Map shows the park with the following classifications: Public Facilities District (PF), Scenic Resources Combining District, and Valley Oak Habitat Combining District (SR VOH). The County's Land Use Map shows the park as designated for Public/Quasi-Public uses (County of Sonoma, 2017).

1.4.2 Existing Park Features and Operations

The park comprises two distinct landscapes. The approximately 35-acre northeastern portion of the park is developed with the 22,000-square-foot Boys and Girls Club, active recreational facilities, and a 116-vehicle parking lot. The Boys and Girls Club offers youth development programs to children and teens from age 4 to 18. The remaining approximately 50-acre southwestern portion of the park (also referred to as the Conservation Area) is undeveloped, consisting of meadows, woodlands, and the Sonoma Creek and riparian corridor. The park currently has two little league baseball fields; one full-sized field and one smaller, T-ball sized field. The park also has two soccer fields; a full-sized main field for regular games and a youth-sized field, which is also used as a practice field. The park currently has five tennis courts and one sand volleyball court. A small playground is located west of the main soccer field. Established picnic areas are situated immediately adjacent to the northern and southern playground boundaries. There is a skateboard park situated along the park's northeast corner, near the intersection of Verano Avenue and S.R. 12. The natural areas of the site within the floodplain and riparian zone include approximately 1.9 miles of soft surface (i.e., earthen) recreational trails, and a number of informal trails.

The park is open daily from sunrise to sunset, seven days per week, year round. Nighttime lighting within the park is presently limited to parking areas, paved pedestrian pathways, and the interior and exterior of the Boys and Girls Club, restroom, and ranger residence buildings. Parking lot and pathway lighting operate on a photocell timer system and are programmed to turn on at sunset and turn off at sunrise.

Regional Parks' operations and maintenance daily activities include restroom cleaning and collecting the litter and recycling throughout the park. During weekends and busy periods, particularly during the summer months, litter and recycling pick-up may happen twice daily. At least twice a week litter pick-up is done on the trails throughout the western portion of the park. Park maintenance workers involved in these daily and weekly activities also provide regular assessment of site conditions including documentation of vandalism and other issues that may require additional attention.



Figure 2
Draft Master Plan

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Additional maintenance activities include weekly mowing and regular weed management throughout the year, supplemented by a limited herbicide spraying program. Tree pruning occurs during the fall and winter months, and maintenance of the irrigation system occurs as needed.

Park rangers patrol the park one to two times per week with added patrols as needed particularly when there is increased homeless activity.

1.4.3 Proposed Improvements

Overview

The proposed Master Plan diagram is presented in Figure 2. Key elements of the Project are numbered on the diagram. The numbers correspond to brief descriptions on the plan's legend. More detailed descriptions of key Project elements are presented below. Where relevant, the descriptions herein reference the number corresponding to the plan element, as presented in Figure 2. For example, plan element Number 1 (No. 1) refers to the proposed baseball concession and restroom building. Accordingly, plan element No. 1 is addressed in the "Concessions, Restrooms, and Picnic Areas" subheading which references No. 1.

Driveway and Fee Station: The park entrance drive on Verano Avenue is proposed to be in the same location as the existing entrance, but the driveway would be realigned and widened to provide more efficient ingress and egress, including a second lane for queueing of west-bound (i.e., left-turning) traffic, and to facilitate proposed parking lot modifications. A new fee station (No. 4) would be constructed in a landscaped median and would include an electronic ticketing system, a small manned kiosk building and a lockable gate.

Parking: The west parking lot would be expanded from the existing 116 stalls to 134 stalls (No. 3), and a new 50-stall parking lot east of the entry road would be constructed (No. 5). American's with Disabilities Act- (ADA) compliant parking stalls would be located along the west and southern edges of the parking lot nearest existing and improved pathways. Each lot would include drop-off zones adjacent to nearby ballfields (Nos. 3a and 5a). A new roundabout would be constructed at the south end of the entrance drive near the Boys and Girls Club to provide improved vehicular circulation including fire truck and emergency vehicle access, accommodate busses that drop off children after school, and facilitate individual pick-ups and drop-offs. The parking lot would include medians planted with new trees and bio-swales for storm water treatment (No. 2). ADA-compliant paved pathways would be established along and through the parking lot with raised or signed crossings where they cross the driveway and drive aisles. New lighting for the entire parking area would include light-emitting diode (LED) fixtures mounted on 25- to 30-foot poles for nighttime lighting. Fixtures would be fully cutoff and fully shielded, thereby limiting lighting to a downward direction. The new 50-stall east parking lot would include canopy-mounted photovoltaic (PV) solar arrays situated above the two central bays of parking, supported by center loaded steel columns. The PV solar arrays would face southward at a pitch of 12 percent with light fixtures mounted to the underside.

Concessions, Restrooms, and Picnic Areas: One new concession and restroom building would be constructed near the improved ballfields (No. 1). At this location, a small picnic area would be

established with new picnic tables and new shade trees. A second concession and restroom building would be located west of the soccer complex and picnic area (No. 16). Adjacent to this location, a group picnic area would be developed with approximately 10 new picnic tables, grills, serving tables, and new shade trees (No. 17). A restroom-only building would be constructed at the south end of the main soccer field (No. 26). All restrooms would have at least two stalls, each with flushable toilets. Restroom and concession buildings would be pre-fabricated buildings constructed of concrete masonry units and steel truss systems. Colors and finishes would be determined during the design phase, but would be similar in appearance to those of existing park facilities. The small entry kiosk would be constructed and finished similarly.

Baseball Complex: Existing baseball fields are proposed to be replaced with new fields that are reconfigured in orientation and size. Each field would be resurfaced with synthetic turf. The west field (No. 10) would be equipped with permanent 4-foot-tall black vinyl clad chain link outfield fencing. The east field (No. 12) would have removable outfield fencing, and an expanded turf area to accommodate an additional youth-sized soccer field (135 x 180 feet). The improved baseball fields would each include new dugout structures, new backstops, and pre-manufactured metal bleachers (No. 11). New field lighting for baseball field No. 10 would include four 70-foot-tall poles with LED fixtures and baseball field No. 12 would include six 70-foot-tall poles with LED fixtures. Behind the bleachers, four new terraces and an ADA-compliant terrace would be built into the existing hillside with cast-in-place concrete retaining walls (No. 9). Two sand volleyball courts (13) would be constructed in an area to the east of the new playground between the access road/ trail to Back Meadow Trail, and the eastern boundary of the park.

Dog Off-Leash Area: To the west of the improved baseball fields, a new 0.5-acre area for off-leash dogs would be established (No. 8). The area would be enclosed with permanent 4-foot-tall black vinyl-clad chain-link fencing with latching gates at each of two access points. One gate would be provided on the north side, connecting to the improved Verano Trail and one gate would be provided on the south side, connecting to the re-aligned Upper Meadow Trail. Existing adjacent trees would be protected during construction, and new trees may be planted.

Soccer Fields: The existing main soccer area would be reconfigured to provide two permanent, dedicated soccer fields; one full-size field (210 x 330 feet; No. 20) and one smaller youth-sized field (135 x 180 feet; No. 19). The full-size field would include overlay striping to accommodate two youth-sized fields (135 x 180 feet; No. 20). The soccer fields would be surfaced with synthetic turf. Each soccer field would include two paved spectator areas with at least one shade structure per side and one pre-manufactured metal bleacher unit (Nos. 18 and 21). Field lighting would include LED fixtures mounted across six 70-foot-tall poles. Player bench seating would be located between the two permanent fields. Permanent black vinyl clad chain-link fencing would be installed around each soccer field, with permanent openings to allow open access into and between the fields.

Bicycle Pump Track: A new bicycle pump track would be developed to the east of the main soccer field (No. 23). The park would include features such as a viewing area, a beginners area, and a progressive skills-building course. The track(s) and skills features would vary in terms of riding surface material from natural clay/loam to asphalt pavement. Any built features within the

facility would be constructed of wood, earth or stone. The areas between the riding surfaces and features would be planted with vegetation and trees for erosion control, and storm water infiltration and treatment features would be provided where space allows. The bike park area would be enclosed by split rail fencing and a landscaped buffer. The entry would be located at the north end of the bike park and would include an adjacent viewing area (No. 22). A row of new trees would be planted along the southern boundary of the bike park area, separating the facility from the existing tennis courts and proposed new pickle ball courts.

Skate Park: The existing skate park (No. 6) north of the bike pump track would be enhanced to include an expanded footprint (approximately 7,000 square feet), updated skate features and new surfacing. Specific design of the enhanced skate area would be determined during the design phase with input from the skate community. Improvements to the site would include removal of the fence, perimeter landscaping and the creation of a shared gathering and viewing space developed in coordination with the proposed bike pump track and skills area (No. 22) immediately to the south.

Tennis and Pickle Ball Courts: Existing tennis courts would remain in place (No. 28). Court restriping and/or resurfacing is handled by the Sonoma Valley Tennis Association and would continue according to the usual schedule. Immediately adjacent to existing tennis courts, four new pickle ball courts would be provided (No. 27). The new pickle ball courts would have paved surfacing similar to the existing tennis courts, with striping delineating each court. The pickle ball courts would be enclosed in permanent 10-foot-tall black vinyl clad chain-link perimeter fencing. New lighting for both the existing tennis courts and the new pickle ball courts would consist of LED fixtures mounted on 50-foot-tall poles.

Play and Fitness Areas: The existing play area would be replaced with a new and expanded play area with new age-specific play structures and features (No. 24). New fall-safe surfacing would be installed around the play structures. The new play area would also include engaging play structures and features composed of natural materials. Existing mature trees would be preserved as part of the play area improvements, and additional trees would be planted where possible along the play area's western and southern perimeters to provide additional afternoon shade. A par course circuit of 8 permanent fitness stations would be installed along the main pathway (see Figure 2, Graphic Legend). To the north and east of the play structures, a natural grass turf area would be established (No. 25) for flexible play.

Pathways and Trails: The existing trail network would be improved through development of a trail hierarchy consisting of trails of varying surfaces (e.g., paved, stabilized aggregate, and earthen surfaces) and widths (e.g., 3 feet to 10 feet). In the northern portion of the park, new concrete and/or asphalt paved pathway alignments would range from 6 feet to 10 feet in width, providing more formal access into the park and connecting existing, improved, and new park elements. For example, Verano Trail improvements would create a more formal central spine, providing connections to amenities within the park, and a regional trail connection between the existing and proposed off-site sidewalk along Verano Avenue and S.R. 12 (No. 32). The Verano Trail would be paved from S.R. 12 to west of the dog off-leash area. In the western more natural portion of the park, improved non-paved pathways would range from 3 feet to 8 feet in width. For

example, the Bay Tree Trail, Nature Trail, and Creek Trail would each be 3 feet wide with improved, earthen surfaces (No. 31). The improved Homestead, Three Meadow, Upper Meadow, Back Meadow trails, and western portion of the Verano Trail would include stabilized aggregate surfacing to provide a consistent firm and stable surface for accessibility. The gravel and soft-surface trails would be improved to correct grade and drainage issues and allow for year-round use. The trail network improvements would include 1.5 miles of paved trails and 1.9 miles of aggregate- or soft-surface trails throughout the park. All trail improvements within the Conservation Area would occur along existing trail alignments. Lighting along pathways would include LED fixtures mounted on 15- to 20-foot poles for nighttime lighting.

Restoration and Landscaping: Under the Master Plan Update, Regional Parks would remove non-native and invasive vegetation at various locations throughout the park (e.g., removal of eucalyptus trees near the tennis courts [No. 29] and riparian areas), construct vegetated swales for the treatment of stormwater (No. 2), and plant new trees throughout the redeveloped park. Landscaping improvements on the upper, developed area of the site, outside the Conservation Area, would include seeding, irrigation, and landscaping with trees and shrubs. Any areas beyond the permanent Project footprint that are disturbed through grading or other construction related activities would be returned to their approximate pre-construction condition (e.g., recontoured and seeded). More intensive landscaping and planting would occur within parking lots, around the plazas, and within the play area and would likely include native and/or ornamental trees, shrubs, ground cover, and lawn. Trees would be planted to provide shade throughout the parking lots and would not conflict with lights or proposed solar arrays. The berms along the park's eastern border with S.R. 12 would be reduced in height to improve site lines into the park, and revegetated (No. 7) with lawn and trees. In addition, work in the riparian restoration zones (No. 33) would include non-native vegetation removal, informal trail eradication to protect sensitive areas, and revegetation with native seeds and plants to stabilize erosive banks and provide enhanced habitat. Two spur trails off the Creek trail providing access points to the creek would be improved and stabilized with wood timber steps to prevent erosion and provide safe access to the creek (No. 31).

Improvements Adjacent to Boys and Girls Club: The exterior spaces immediately adjacent to the south and west of the Boys and Girls Club building (No. 15a) could be enhanced through improved pathways and paved areas, and the creation of new and improved programmable outdoor spaces for educational and recreational activities, such as gardening and basketball. At the northwestern side of the building paving improvements would be coordinated with the synthetic turf and perimeter landscaping of the field improvements.

1.4.4 Project Construction

The main construction activities would include site preparation, consisting of existing facilities demolition and removal, excavation, grading, and compacting the base for new trails and facilities; construction of prefabricated buildings, parking areas, ballfields and associated amenities, and pathways and trails; as well as landscape improvements, such as fine grading, seeding, and planting. Detailed, facility-specific construction information has not yet been developed. Therefore, this IS/MND relies upon standard construction assumptions for urban, community park projects of this

size and scope.¹ A summary of anticipated construction requirements by construction phase, is presented in **Table 1-2**.

TABLE 1-2
CONSTRUCTION REQUIREMENTS BY PHASE

Project Component/Site	Component Number	Ground Disturbance (acre)	Depth of Excavation (inches) / Quantity of Excavation and Fill (cubic yards)*
Phase 1			
Baseball Complex (field #10 only)	1, 9, 10, 11	2.25	<ul style="list-style-type: none"> Depth: average 12 inches; maximum 24 inches Export: 430 cy Import: 1,555 cy
Soccer Complex (large field #20 only)	16, 17, 20, 21, 25	2.8	<ul style="list-style-type: none"> Depth: average 12 inches; maximum 24 inches Export: 715 cy Import: 2,820 cy
Restroom / Concession Buildings	1,16, 26	0.001	<ul style="list-style-type: none"> Depth: 8 inches Export: 50 cy Import: 54 cy
Driveway, entry, turnaround, parking lot (98 spaces), bioswales	2, 3, 4	1.2	<ul style="list-style-type: none"> Depth: average 8 inches; maximum 48 inches (gate footings) Export: 1,060 cy Import: 11,360 cy
Soft Surface Trail improvements Enhanced creek access points; Verano trail from bridge into park	31, 32	1.5	<ul style="list-style-type: none"> Depth: 18 inches Export: n/a Import: 1,270 cy
Play and Exercise Area	n/a	0.41	<ul style="list-style-type: none"> Depth: average 4 inches; maximum 16 inches Export: 703 cy Import: 815 cy
Landscaping Repair/ Restoration	n/a	3.0	<ul style="list-style-type: none"> Depth: 4 inches Export: 260 cy Import: 1,160 cy
Paved trail improvements throughout park	32	1.39	<ul style="list-style-type: none"> Depth: 18 inches Export: 715 cy Import: 1,800 cy
Phase 2			
Parking and drop-off zone	5, 5a	0.56	<ul style="list-style-type: none"> Depth: average 8 inches; maximum 16 inches Export: 150 cy Import: 510 cy
Baseball Complex, (field #12 only)	12	1.25	<ul style="list-style-type: none"> Depth: average 12 inches; maximum 24 inches Export: 320 cy Import: 1,350 cy
Soccer Complex (small field #19 only)	18, 19	1.03	<ul style="list-style-type: none"> Depth: average 12 inches; maximum 24 inches Export: 240 cy Import: 1,020 cy

¹ South Coast Air Quality Management District (SCAQMD). 2016. California Emissions Estimator Model®. Available at: <http://www.CalEEMod.com/>. Accessed August 2017.

TABLE 1-2 (CONTINUED)
CONSTRUCTION REQUIREMENTS BY PHASE

Project Component/Site	Component Number	Ground Disturbance (acre)	Depth of Excavation (inches) / Quantity of Excavation and Fill (cubic yards)*
Phase 2 (cont.)			
Dog off-leash area	8	0.45	<ul style="list-style-type: none"> • Depth: 2 inches • Export: n/a • Import: 24 cy
Bike Skills Area	22, 23	0.88	<ul style="list-style-type: none"> • Depth: average 4 inches; maximum 48 inches (fence post footings) • Export: 238 cy • Import: 155 cy
Skate park enhancement	6	0.26	<ul style="list-style-type: none"> • Depth: n/a • Export: n/a • Import: n/a
Reduced berm height and landscaping repair/restoration	7	4.3	<ul style="list-style-type: none"> • Depth: 18 to 24 inches • Export: 2,335 cy • Import: 2,965 cy
Phase 3			
Sand volleyball court	13	0.17	<ul style="list-style-type: none"> • Depth: 18 inches • Export: 50 cy • Import: 575 cy
Tennis and Pickle ball court improvements	27, 28	0.25	<ul style="list-style-type: none"> • Depth: average 4 inches; maximum 24 inches (fence post footings) • Export: 140 cy • Import: 345 cy
Non-native tree removal	29	n/a	<ul style="list-style-type: none"> • Depth: n/a • Export: n/a • Import: n/a
Remainder of expanded parking lot (36 spaces), drop off zone, and bioswales	2,3, 3a	0.70	<ul style="list-style-type: none"> • Depth: average 12 inches; maximum 16 inches • Export: 60 cy • Import: 960 cy
Riparian Restoration	33	6.0	<ul style="list-style-type: none"> • Depth: n/a • Export: n/a • Import: n/a

For purposes of this IS/MND, it is assumed that construction would be completed in three phases, over a 3-year period, beginning in 2019 and ending in 2022. Construction activities would take place during daytime hours from 8:00 a.m. and 5:00 p.m., Monday through Friday.

Since complete funding has not been secured and detailed plans have not been prepared, it is possible that Project construction could proceed in a different sequence, or require additional time. Accordingly, the assumptions underlying construction sequencing and timing presented herein are conservative; the actual effects of construction may be less than presented herein (e.g., if fewer Project components were constructed in a given year, and additional phases were required to complete the proposed Master Plan Update improvements).

Project construction would be expected to require a crew of approximately 10 workers for the duration of construction (approximately 34 months). The area of ground disturbance would be approximately 29.15 acres. Depth of excavation would be expected to range from 8 to 24 inches, but would vary based on the specific site element, and may be greater in certain locations where foundations or footings are required. Truck trips would be required for materials deliveries, and for off-haul of construction waste and excavated material. Off-hauled materials would be expected to be disposed at the Redwood Landfill in Novato, CA. Construction may require tree removal; however, per the Sonoma County Heritage or Landmark Tree Ordinance, the removal of heritage or landmark trees would be avoided unless the tree were dead or likely to spread insects or diseases; pose a public safety or property hazard; or create an unreasonable economic impact on the property (Sonoma County, 1986).

Construction Access and Equipment

Construction workers would access the Project area via Verano Avenue. The types of equipment, that would be used during construction, could include, but would not be limited to the following:

- Backhoe loader (1)
- Grader (1)
- Bobcat type skid steer loader (1)
- Asphalt grinder (1)
- Asphalt paver (1)
- Compactors/rollers (2)
- Excavator (1)
- Generator (1)
- Chainsaws for tree and brush removal (2)
- Trucks/trailers (4)
- Concrete mixer/pump/vibrator (1)

Staging of equipment would occur in the existing or expanded parking areas, and within the limits of construction sites. Construction workers would park in the subject staging area and would walk or be transported to the work sites. Construction access would be through the park and would be planned to minimize disruption and disturbance to existing park users. During portions of the construction work window, lane closures along affected segments of Verano Avenue could be required in the vicinity of the park entrance. Road construction signage, traffic cones, flaggers, and K-rail (temporary concrete traffic lane barriers) would be used, as appropriate, to direct the public around the construction.

1.4.5 Project Visitation and Operations

With the addition of nighttime lighting, park hours would be extended. New park hours would be dawn to 10:00 p.m. Due to the facilities improvements and additional parking, peak park visitation could increase from about 170 under existing conditions to about 270 under Project conditions (TJKM, 2018; Regional Parks, 2018). This estimate conservatively assumes all facilities are utilized to maximum capacity at the same time. Given the rarity of such occurrence, actual visitation at a given time would likely be lower.

All lighting would be controlled by an automated control system which would turn lights on at sunset. Parking lot lights and security lighting on the buildings would remain on until dawn. All pathway, field and court lighting would be turned off at 10:00 p.m. daily. Staff would be able to override the system to turn off the field lights earlier than 10:00 p.m., if necessary.

Throughout and following completion of park improvements, Regional Parks staff would continue to maintain most park facilities as it does under present conditions. Daily operations and maintenance activities would continue to include restroom cleaning and litter and recycling collection throughout the park. During weekends and busy periods, particularly during the summer months, litter and recycling pick-up may happen twice daily. Maintenance activities would continue to include weekly mowing and regular weed management throughout the year, supplemented by a limited herbicide spraying program. However, with the addition of synthetic turf fields, these activities would occur over a smaller area. Tree pruning would continue to occur during the fall and winter months, and irrigation system maintenance would continue, as needed. Park rangers would continue to patrol the park one to two times per week, with added patrols as needed particularly when there is increased homeless activity.

Synthetic turf maintenance would consist of spot washing (using only dish soap and water, no disinfectants or special detergents would be used). Although small amounts of solvents and adhesives could be required to make minor repairs, they would not be used in large quantities; only in spot applications at the specific repair location. Regional Parks would establish a site-specific maintenance schedule, with activities and timing similar to that of other synthetic turf fields in the region. For example, sweeping would likely occur every 2 weeks, or as needed, and turf grooming every 5 to 8 weeks. Repair of turf, removal of graffiti, and spot washing with soap and water would be conducted as needed.

The above-described operations and maintenance activities would be conducted by existing staff resources. The frequency of maintenance activities would increase commensurate with anticipated increases in visitation. However, Project operations and maintenance activities would not be expected to increase staffing demands such that additional park employees would be required.

1.5 Report Organization

This report is organized as follows:

Section 1, Project Description, provides an introduction to the Project, along with discussion of Project background, needs and objectives, and proposed facilities.

Section 2, Environmental Checklist Form, presents the County's Initial Study Environmental Checklist, and analyzes environmental impacts resulting from the Project and describes the mitigation measures that would be incorporated into the Project to avoid or reduce impacts to less-than-significant levels.

Section 3, Draft Mitigation Monitoring Program, lists the mitigation measures that are recommended in Section 2 and describes required monitoring and reporting actions.

1.6 Approvals

A summary of permits and approvals that could be required for Master Plan implementation is provided below. Further regulatory approvals could be required in the event that local, county, state, or federal agencies determine that specific construction activities require additional permits or approvals.

1.6.1 Federal

- U.S. Army Corps of Engineers approval of Section 404 permit
- California Office of Historic Preservation, National Historic Preservation Act consultation

1.6.2 State

- State Water Resources Control Board: issuance of coverage under the National Pollution Discharge Elimination System, Construction General Permit for stormwater discharges associated with construction activities that disturb more than one acre of land
- Regional Water Quality Control Board approval of 401 Water Quality Certification and/or Waste Discharge Requirements application
- California Department of Fish and Wildlife approval of Streambed Alteration Agreement

1.6.3 Local

- Sonoma County Board of Supervisors: adoption of the IS/MND and mitigation monitoring and reporting plan, and adoption of the Maxwell Farms Master Plan.

1.7 References

County of Sonoma. 2017. Permit Sonoma Online Permitting Tool.

<https://prmd.sonomacounty.ca.gov/CitizenAccess/APO/ParcelDetail.aspx?ParcelSeq=1&ParcelUID=&sourceNumbs=&ParcelNum=127-141-014&agencyCode=>

Sonoma County Regional Parks (Regional Parks), 2018. Estimate of Maxwell Farms Regional Park Existing Visitation at Park Facilities Capacity.

TJKM, 2018. Maxwell Farms Regional Park Draft Transportation Impact Analysis Report, prepared for Sonoma County Regional Parks. August 29, 2018.

CHAPTER 2

Environmental Checklist

- 1. Project Title:** Maxwell Farms Regional Park Master Plan Update
- 2. Lead Agency Name and Address:** Sonoma County Regional Parks
2300 County Center Drive, Suite 120A
Santa Rosa, CA 95403
- 3. Contact Person and Phone Number:** Scott Wilkinson
(707) 565-2041
- 4. Project Location:** Maxwell Farms Regional Park
100 Verano Avenue
Sonoma, CA 95476
[APNs: 127-141-014, 127-141-015, 127-141-017]
- 5. Project Sponsor's Name and Address:** Sonoma County Regional Parks
2300 County Center Drive, Suite 120A
Santa Rosa, CA 95403
- 6. General Plan Designation(s):** Public/Quasi-Public
- 7. Zoning:** Public Facilities District (PF), Scenic Resources
Combining District (SR), and Valley Oak
Habitat Combining District (VOH)

8. Description of Project:

The Maxwell Farms Regional Park Master Plan Update Project would involve various and substantial renovations to the existing park including: a new driveway and fee station, expanded parking area, vehicular and pedestrian circulation improvements, updated baseball and soccer complexes, new lighting, improved pathways and trails, new play and picnic areas, new restroom and concession buildings, and restoration and landscaping. Construction would be completed in three phases, as funding is available, with a first phase beginning in Summer 2019.

9. Surrounding Land Uses and Setting.

The park is located at 100 Verano Avenue, in an area of unincorporated Sonoma County adjacent to the City of Sonoma, California. The park is bounded by Riverside Drive to the west, Verano Avenue to the north, Highway 12 to the east and Ramon Street to the south. Residential properties border the park on its west, north, and south sides; notably the El Verano neighborhood west of

Riverside Dr., the Finnish American Home Association Manor Senior Apartments along Old Maple Avenue, and the Sonoma Oaks Mobile Home Park along Ramon Street. The Maxwell Village Shopping Center bounds the property to the southeast. The County's Zoning Map shows the park with the following classifications: Public Facilities District (PF), Scenic Resources Combining District, and Valley Oak Habitat Combining District (SR VOH). The County's Land Use Map shows the park as designated for Public/Quasi-Public uses.

10. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.)

State Water Resources Control Board: issuance of coverage under the National Pollution Discharge Elimination System (NPDES), Construction General Permit for stormwater discharges associated with construction activities that disturb more than one acre of land.

Sonoma County Board of Supervisors: adoption of the IS/MND and mitigation monitoring and reporting plan, and adoption of the Maxwell Farms Master Plan Update.

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, has consultation begun?

The Federated Indians of Graton Rancheria requested consultation via letter dated July 19, 2019. A site visit with a tribal representative to discuss the Project occurred on October 12, 2018. Suggestions from the tribal consultation have been incorporated into the Project's analysis and mitigation. As consultation is ongoing, draft plans and mitigation measures will continue to be shared for review by the Tribe prior to finalizing.

2.1 Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a “Potentially Significant Impact” as indicated by the checklist on the following pages.

- | | | |
|--|---|--|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture and Forestry Resources | <input checked="" type="checkbox"/> Air Quality |
| <input checked="" type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Cultural Resources | <input type="checkbox"/> Geology/Soils |
| <input type="checkbox"/> Greenhouse Gas Emissions | <input checked="" type="checkbox"/> Hazards & Hazardous Materials | <input checked="" type="checkbox"/> Hydrology/Water Quality |
| <input type="checkbox"/> Land Use/Planning | <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Noise |
| <input type="checkbox"/> Population/Housing | <input type="checkbox"/> Public Services | <input checked="" type="checkbox"/> Recreation |
| <input checked="" type="checkbox"/> Transportation/Traffic | <input checked="" type="checkbox"/> Tribal Cultural Resources | <input type="checkbox"/> Utilities/Service Systems |
| | | <input checked="" type="checkbox"/> Mandatory Findings of Significance |

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial study:

- ☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature

Date

Signature

Date

2.2 Evaluation of Environmental Effects

The Environmental Checklist and discussion that follow are based on sample questions provided in the CEQA Guidelines (Appendix G of the California Code of Regulations, Title 14, Division 6, Chapter 3), which focus on various individual concerns within 18 different broad environmental categories, such as air quality, cultural resources, land use, and traffic (and arranged in alphabetical order). The Guidelines also provide specific direction and guidance for preparing responses to the Environmental Checklist. Each question in the Checklist essentially requires a “yes” or “no” reply as to whether or not the project would have a potentially significant environmental impact of a certain type, and, following a Checklist table with all of the questions in each major environmental heading, citations, information and/or discussion that supports that determination. The Checklist table provides, in addition to a clear “yes” reply and a clear “no” reply, two possible “in-between” replies, including one that is equivalent to “yes”, but with changes to the project that the proponent and the Lead Agency have agreed to that result in a “no” reply; and another “no” reply that requires a greater degree of discussion, supported by citations and analysis of existing conditions, threshold(s) of significance used, and project effects resulting in a “no” reply. Each possible answer to the questions in the Checklist, and the different type of discussion required, are discussed below:

- A. **Potentially Significant Impact.** Checked if a discussion of the existing setting (including relevant regulations or policies pertaining to the subject) and project characteristics with regard to the environmental topic demonstrates, based on substantial evidence, supporting information, previously prepared and adopted environmental documents, and specific criteria or thresholds used to assess significance, that the project would have a potentially significant impact of the type described in the question.
- B. **Less Than Significant With Mitigation.** Checked if the discussion of existing conditions and specific project characteristics, also adequately supported with citations of relevant research or documents, determine that the project clearly would or would be likely to have particular physical impacts that would exceed the given threshold or criteria by which significance is determined, but that with the incorporation of clearly defined mitigation measures into the project, that the project applicant or proponent has agreed to, would be avoided or reduced to less-than-significant levels.
- C. **Less Than Significant Impact.** Checked if a more detailed discussion of existing conditions and specific project features, also citing relevant information, reports or studies, demonstrates that, while some effects may be discernible with regard to the individual environmental topic of the question, the effect would not exceed a threshold of significance, which has been established by the Lead or a Responsible Agency. The discussion may note that due to the evidence that a given impact would not occur or would be less than significant, no mitigation measures are required.
- D. **No Impact.** Checked if brief statements (one or two sentences) or cited reference materials (maps, reports or studies) clearly show that the type of impact could not be reasonably expected to occur due to the specific characteristics of the project or its location (e.g., the project falls outside the nearest fault rupture zone, or is several hundred feet from a 100-year flood zone, and relevant citations are provided). The referenced sources or information may also show that the impact simply does not apply to projects like the one involved. A response to the question may also be "No Impact" with a brief explanation of adequately supported

project-specific factors or general standards (e.g., the project would not expose sensitive receptors to pollutants, based on a basic screening of the specific project).

The discussions of the replies to the Checklist questions must take account of the whole action involved in the project, including off-site as well as on-site effects, both cumulative and project-level impacts, indirect and direct effects, and construction as well as operational impacts. Except when a “No Impact” reply is indicated, the discussion of each issue must identify:

- a) the significance criteria or threshold, if any, used to evaluate each question; and
- b) the mitigation measure identified, if any, to reduce the impact to less than significant, with sufficient description to briefly explain how the mitigation measure would reduce the effect to a less than significant level.

Impacts and Mitigation Measures

Environmental impact discussions are generally presented in their order of appearance in the CEQA Guidelines Appendix G Environmental Checklist. For example, the first checklist question related to Cultural Resources impacts is numbered 2.5a. Mitigation measures are titled to correspond to the impact topics; for example, Mitigation Measure CUL-1 addresses impacts associated with cultural resources, while Mitigation Measure BIO-1 addresses impacts associated with biological resources. Cumulative impacts are discussed at the end of each environmental topic impact discussion. Unless otherwise specified, mitigation measures apply to all Project components.

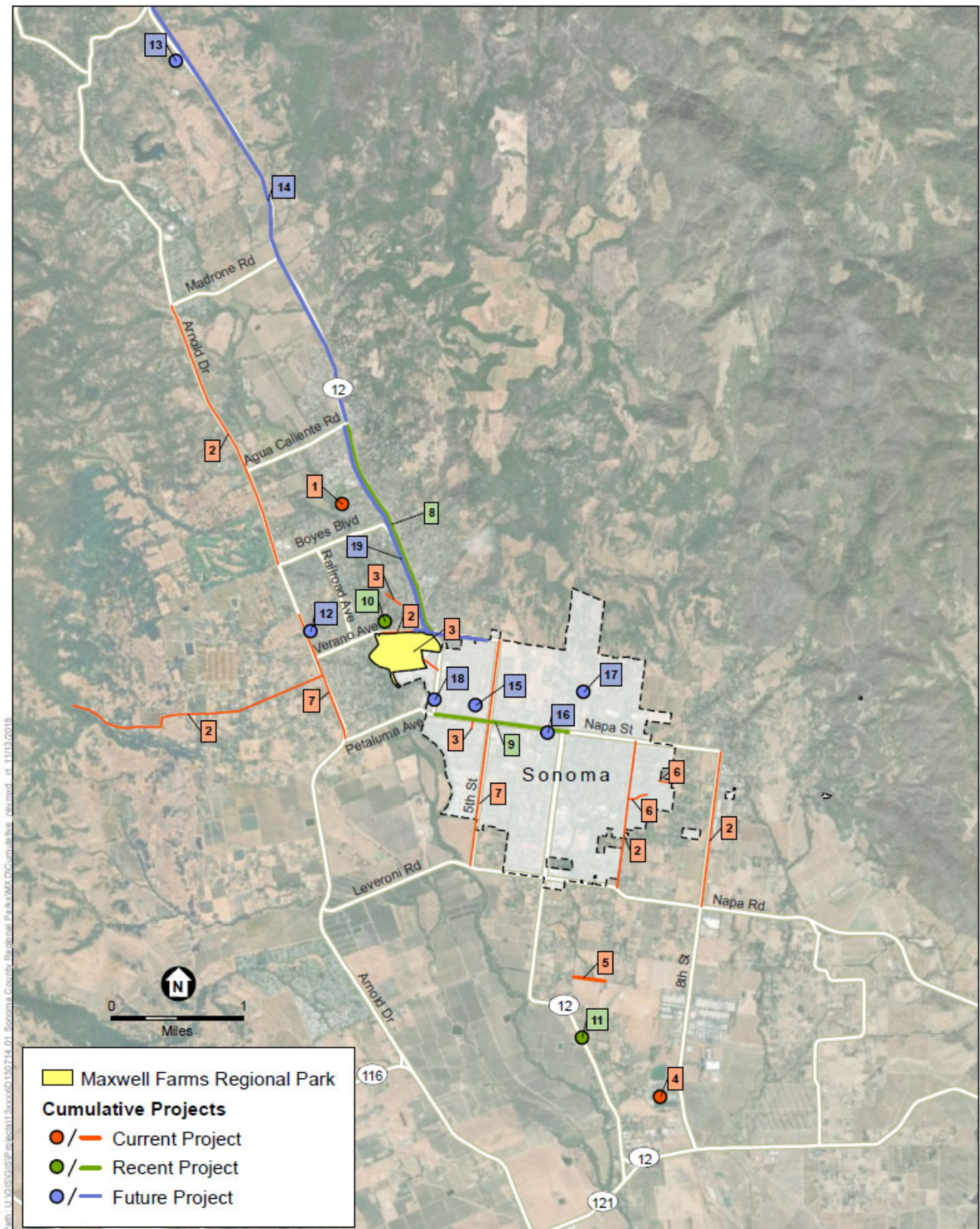
Approach to Cumulative Impact Analysis

Two approaches to a cumulative impact analysis are provided in CEQA Guidelines Section 15130(b)(1): (1) the analysis can be based on a list of past, present, and reasonably foreseeable probable future projects producing closely related impacts that could combine with those of a project, and (2) a summary of projections contained in a general plan or related planning document can be used to determine cumulative impacts. The following factors were used to determine an appropriate list of individual projects to be considered in this cumulative analysis:

- **Similar Environmental Impacts**—A relevant project contributes to effects on resources that are also affected by the project. A relevant future project is defined as one that is “reasonably foreseeable,” such as a project for which an application has been filed with the approving agency or whose funding has been approved.
- **Geographic Scope and Location**—A relevant project is one within the geographic area where effects could combine. The geographic scope varies on a resource-by-resource basis. For example, the geographic scope for evaluating cumulative effects on air quality consists of the affected air basin.
- **Timing and Duration of Implementation**—Effects associated with activities for a relevant project (e.g., short-term construction or long-term operations) would likely coincide with the related effects of the project.

Table 2-1 lists the plans and projects in the Project vicinity (see **Figure 3**) considered in the cumulative impact analysis, based on the above-referenced factors. Cumulative projects which could have implementation schedules that overlap with the construction of the proposed Project are listed in bold. The assessments of potential cumulative impacts are addressed in the respective topical sections of the document, and summarized in Section 2.19, Mandatory Findings of Significance.

As noted in the table, the County is presently preparing the Draft Springs Specific Plan (Project No. 19) for the 178-acre Springs planning area immediately north of Maxwell Farms Regional Park. In late July 2018, Permit Sonoma published a Notice of Scoping Meeting and Preparation of Draft Environmental Impact Report (EIR) for the Springs Specific Plan. The notice explains the Specific Plan will be the primary planning document and reference guide for future development of the planning area, and will constitute the policy and regulatory framework by which future development projects will be reviewed and public improvements will be implemented. The topics specifically identified for consideration in the Specific Plan include land use, circulation, and design, among others. While the notice does not provide specific details regarding potential future projects within the plan area, it does indicate that future residential and non-residential development is anticipated. Development under the Specific Plan could involve impacts similar to those identified for the other cumulative projects identified in Table 2-1, and including operational impacts related to traffic and air quality, among others. At the same time, the policy and regulatory framework set forth in the plan would likely include provisions to reduce or avoid such impacts. Given the Specific Plan and Draft EIR have not been released for public review, any assessment of potential cumulative effects would be speculative at this time. The Specific Plan project is acknowledged here due to its proximity to the Maxwell Farms Regional Park Project site, but for the above reasons is not addressed in further detail within the topical sections of this document.



SOURCE: ESA, 2018

Maxwell Farms Regional Park Master Plan Update

Figure 3
Cumulative Projects in the Project Vicinity

TABLE 2-1
PROJECTS CONSIDERED IN THE CUMULATIVE IMPACT ANALYSIS

Project No.	Project Name (Jurisdiction) Location	Project Description	Estimated Implementation Schedule
Current and Ongoing Projects			
1	Larson Park Improvements (Sonoma County Regional Parks, Sonoma County) Location: 329 DeChene Avenue, Boyes Hot Springs	The updated Master Plan will outline any renovations to the existing park facilities, and describe any new features to be included based on the future needs of the neighborhood residents and broader community of Sonoma Valley. Improvements to the facilities and infrastructure will be balanced with natural resource values, conservation objectives, and the existing conditions of the site. (County of Sonoma, 2018a).	2020-2022
2	Road Pavement Preservation, Sonoma area (Sonoma County Transportation and Public Works Department, Sonoma County) Location: Arnold Drive from Boyes Boulevard to Madrone-Agua Caliente Road; Grove Street from White Adler to Arnold Drive; Verano Boulevard from Bridge to Main Street; Fifth Street East to Napa Road; Eight Street East to Napa Road	Pavement treatments at various locations (County of Sonoma, 2018b).	2018-2019
3	Sonoma Trunk Sewer Replacement MH90-3 to MH 136-5 (Sonoma County Water Agency, Sonoma County)	As part of the ongoing effort to increase the system's capacity and prevent sanitary sewer overflows, the Sonoma Valley County Sanitation District is carrying out 1.8 miles of high-priority projects over the next several years. The first phase of the project is expected to get under way starting in 2018. The multi-year project would replace a portion of the existing sewer trunk main alignment in three phases (SCWA, 2018c): 1 st Phase – From the intersection of 6th Street West & Studley Street, north to Highway 12, and up to Ramon Street; 2 nd Phase – From Highway 12 and Ramon Street, through Maxwell Farms Regional Park, to West Verano Avenue; 3 rd Phase – From Buena Vida Court to Happy Lane.	Through 2020
4	North Bay Water Reuse Program – Sonoma Valley County Sanitation District Treatment Plant – Pumping and Piping Upgrade. (Sonoma County Water Agency) Location: 22675 8th Street East, Sonoma	Upgrades at the Sonoma Valley County Sanitation District Wastewater Treatment Plant outside the limits of the City of Sonoma. The work includes construction of approximately 3,000 linear feet of pipeline ranging from 12 to 18 inches in diameter, the addition of two vertical turbine pumps and one 1,980 gallon hydropneumatic bladder tank. Site work also includes piping, vaults, electrical and instrumentation (SCWA, 2018b).	Current (2016)
5	North Bay Water Reuse Program – SVCSD Fifth Street East Recycled Water Pipeline Project (Sonoma County Water Agency) Location: From the intersection of Watmaugh Road and Shainsky, extending east to Fifth Street, and into Valley Oaks Park	Approximately 8,000 linear feet of recycled water mainline pipe, valves, appurtenances and service laterals (SCWA, 2018b).	Current (2016)

TABLE 2-1 (CONTINUED)
PROJECTS CONSIDERED IN THE CUMULATIVE IMPACT ANALYSIS

Project No.	Project Name (Jurisdiction) Location	Project Description	Estimated Implementation Schedule
Current and Ongoing Projects (cont.)			
6	2017 Street Rehabilitation & Water Services Replacement (City of Sonoma Department of Public Works) Location: Avenue Del Oro (from Fifth Street East to Cordilleras Drive and #693 Avenue Del Oro to Appleton Way), Aureo Court, and El Nido Court.	Street rehabilitation and removal/replacement of 1-inch water service and water main blow-off valve infrastructure. Specifically, improvements consist of demolition activities (e.g. asphalt saw cutting, concrete saw cutting, demolition of existing water service materials, etc.); trenching and shoring; construction dewatering; installation of water service materials; trench surface restoration; edge-grinding existing asphalt pavement; repairing localized pavement failures; frontage improvements; crack sealing; hot mix asphalt base course, overlay, and dike; traffic striping; curb painting and pavement markings; replacing water valve frame and cover; adjusting utility structures to grade; removal and replacement of existing concrete sidewalk, curb and gutter, driveway and pedestrian curb ramps; upgrading existing pedestrian curb ramps for ADA compliance; temporary traffic control; and related work (City of Sonoma, 2018a).	Through 2018
7	Pavement Preservation Program (City of Sonoma Department of Public Works) Location: Fifth Street west, Arnold Drive, Adobe Road, and Bucks Road	Various pavement improvements (County of Sonoma, 2018b).	Through 2018
Recent Projects			
8	Central Sonoma Valley Trail (Sonoma County Regional Parks, Sonoma County) Location: Parallel to S.R. 12 between Verano Avenue and Agua Caliente Road; Verano Avenue between Sonoma Creek and Main Street	This multi-phased project is described in the Central Sonoma Valley Bikeway Plan as a conceptual 2.76-mile bike/pedestrian pathway consisting of bike paths, bike lanes, and bike routes paralleling S.R. 12. The pathway will provide pedestrians and bicyclists an alternative route to the highway through on-street and off-street improvements (County of Sonoma, 2018a).	Current
9	West Napa Street Water System Replacement (City of Sonoma Department of Public Works) Location: West Napa Street between Broadway and Sonoma Highway (S.R. 12)	Replacement of designated water services; the addition of fire hydrants; and the replacement of the old 8-inch water main from the Plaza, extending west to Sonoma Highway (near Staples) (City of Sonoma, 2018a).	Completed, 2017
10	Sonoma Valley County Sanitation District Agua Caliente Creek Crossing (Sonoma County Water Agency) Location: Aqua Caliente Creek Crossing. Several locations are affected. APN: 056-611-078/056-611-079 APN: 056-611-063/056-611-064/056-611-065 APN: 056-531-006/056-611-009 APN: 127-071-009 (Fairview Ln., Buena Vida Ct., and Old Maple Ave.)	Replacement of 620 linear feet of sewer trunk main, including removal and realignment of trunk main and removal of the above channel crossing of Agua Caliente Creek. Work also included construction of 639 linear feet of HDPE pipe, 239 linear feet of siphon pipe and 133 linear feet of pipe rammed steel casing under Agua Caliente Creek (SCWA, 2018a).	Completed, 2015-2016

TABLE 2-1 (CONTINUED)
PROJECTS CONSIDERED IN THE CUMULATIVE IMPACT ANALYSIS

Project No.	Project Name (Jurisdiction) Location	Project Description	Estimated Implementation Schedule
Recent Projects (cont.)			
11	North Bay Water Re-Use Program – Sonoma Valley County Sanitation District – McGill Road Recycled Water Pipeline (Sonoma County Water Agency) Location: Along McGill Road crossing Highway 12, outside the City of Sonoma.	Construction of a recycled water pipeline (SCWA, 2018a).	Completed, 2014-2015
Foreseeable Future Projects			
12	Ernie Smith Community Park Renovation, Bridge Replacement (Sonoma County Regional Parks) Location and areas affected: 18776 Gillman Drive, Sonoma, CA; S.R. 12 and Sonoma Valley	Replace pedestrian bridge, playground, and picnic areas. Replace athletic field irrigation system and renovate turf. Perform silt removal as part wetland restoration and flood control along creek (Sonoma County, 2016).	2019-2020
13	Sonoma Valley Regional Park Expansion Master Plan (Sonoma County Regional Parks) Location: SVRP: 13630 Sonoma Highway, Glen Ellen	Two properties were added to Sonoma Valley Regional Park: the 29-acre Curreri Addition, and a 41-acre property from the Sonoma Developmental Center (County of Sonoma, 2018a).	2018-unknown
14	Sonoma Valley Trail (Sonoma County Regional Parks) Location: Highway 12 in Santa Rosa to Agua Calientes Road in the Springs area.	The Sonoma Valley Trail is a proposed 13-mile paved trail along the scenic Highway 12 corridor between Santa Rosa and Sonoma. The scenic corridor offers fantastic views of Sonoma Valley but lacks a safe and separated pathway for pedestrians and bicyclists traveling north and south. A feasibility study was completed to help facilitate the trail development. This trail project would develop a separated pathway connecting Sonoma with Santa Rosa (County of Sonoma, 2018a).	Proposed
15	Olivia Apartments (City of Sonoma Planning Department, Sonoma County) Location: 655 West Spain Street, Sonoma, CA	30-unit complex (4 buildings on 1.5 acres) (City of Sonoma, 2018b).	2018-2019
16	Sonoma Hotel (City of Sonoma Planning Department, Sonoma County) Location: 153 West Napa Street and 541 First Street West.	62 room hotel and parking garage (City of Sonoma, 2018b)	2018-2019
17	First Street East Project (City of Sonoma Planning Department, Sonoma County) Location: 216, 226, 254 First Street East, 273-299 Second Street East.	Mixed-use development featuring 27 condominiums, 5 detached units, and a 30-unit hotel with a 32-seat restaurant. (City of Sonoma, 2018b)	Undefined
18	Taub Apartments (City of Sonoma Planning Department, Sonoma County) Location: 19410 Sonoma Highway (SR 12)	Residential development featuring 12 apartment units and two live-work units (City of Sonoma, 2018b)	Undefined

TABLE 2-1 (CONTINUED)
PROJECTS CONSIDERED IN THE CUMULATIVE IMPACT ANALYSIS

Project No.	Project Name (Jurisdiction) Location	Project Description	Estimated Implementation Schedule
Foreseeable Future Projects (cont.)			
19	The Springs Specific Plan Location: Along Verano Avenue and SR12, north of Maxwell Farms Regional Park.	New Specific Plan for the Springs involving an area of approximately 178 acres adjacent to the Highway 12 corridor from Agua Caliente Road to Verano Avenue and including the Donald Street neighborhood. The project will include amendments to the General Plan and a number of zone changes required to implement the specific plan (County of Sonoma, 2018c)	Undefined

References

- City of Sonoma, 2018a. City of Sonoma, Public Works Department – Infrastructure Projects. Webpage. Available at: www.sonomacity.org/west-napa-water-main/. Accessed April 16, 2018.
- City of Sonoma, 2018b. City of Sonoma, Planning Department – Development Projects. Webpage. Accessed on April 16, 2018. Available at: <https://www.sonomacity.org/development-projects/>.
- County of Sonoma, 2016. Expenditure Plan Summary. Page 8. Available at: <http://parks.sonomacounty.ca.gov/WorkArea/DownloadAsset.aspx?id=2147522963>. Accessed April 16, 2018.
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- County of Sonoma, 2018b. Transportation and Public Works Department - Roads Division, Construction Project Archive. Webpage. Available at: <https://sonomacounty.ca.gov/TPW/Projects/Projects-by-Year/>. Accessed April 16, 2018.
- County of Sonoma, 2018c. Permit and Resource Management Department. Notice of Scoping Meeting and Preparation of Draft Environmental Impact Report for The Springs Specific Plan. June 27, 2018. Available online at: https://static1.squarespace.com/static/56463caae4b00f3153226641/t/5b43c73c8a922de5b1bf6194/1531168581653/NOP_Scoping_6.27.18_Final.pdf. Accessed on November 11, 2018.
- Sonoma County Water Agency (SCWA), 2018a. Recently Completed Projects. Webpage. Available at: www.scwa.ca.gov/recently-completed-projects/. Accessed April 16, 2018.
- Sonoma County Water Agency (SCWA), 2018b. Projects in Progress. Webpage. Available at: www.scwa.ca.gov/projects-in-progress/. Accessed April 16, 2018.
- Sonoma County Water Agency (SCWA), 2018c. SVCSD Sewer Replacement Project. Webpage. Available at: www.scwa.ca.gov/svcسدsewerproject/. Accessed April, 2016.

2.3 Environmental Checklist

Aesthetics

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
1. AESTHETICS — Would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

The study area for the aesthetic resources impact analysis includes the limits of proposed grounds and facilities improvements sites within Maxwell Farms Regional Park; as well as public areas beyond these sites, both within and beyond the limits of the park from which proposed Project activities would be visible, including portions of Verano Avenue and S.R. 12.

The project site is located adjacent to a County Scenic Corridor that extends north along S.R. 12, from the intersection of Verano Avenue and S.R. 12 (Sonoma County, 2016). Accordingly, the portion of the property located adjacent to Verano Avenue and S.R. 12 (APN: 127-141-014) is designated as a Scenic Resources Combining District (SR). As explained in Article 64, SR Scenic Resources Combining District, of the Sonoma County Municipal Code, this designation is intended to preserve the visual character and scenic resources of Sonoma County lands. The California Scenic Highway System identifies this segment of highway as an Eligible State Scenic Highway, but it is not officially designated as a State Scenic Highway (Caltrans, 2018).

Photographs depicting representative views of park structures, courts, and fields; pathways and trails; and vegetation and topography are presented in **Figures 4a** through **4c**. As described in Section 1.4.2, Existing Park Features and Operations, and further illustrated in the photographs, the Project site consists of an urban segment, and a more natural segment.

The urbanized portion of the park is characterized by parking lots, structures, tennis courts ballfields, and a playground, connected by paved pathways and manicured lawns, concentrated along the north and eastern portions of the park, generally bounded by Verano Avenue to the north, S.R. 12 to the east, the Maxwell Village shopping center to the south. A densely wooded corridor forms the western boundary, and constitutes the primary scenic characteristic, of this urbanized landscape. Views within this portion of the park are generally open, with development and landscape modification the prominent and defining aesthetic characteristics. Representative views for this portion of the park are presented in Figure 4b, Photos 3 and 4.



Photo 1. View southwest across El Verano Ave. towards baseball fields



Photo 2. View west towards tennis courts from S.R. 12 sidewalk

03/30/21 4.05

SOURCE: ESA, 2018

Maxwell Farms Regional Park Master Plan Update

Figure 4a
Representative Photographs



Photo 3. View east towards baseball field and Boys & Girls Club from bleachers



Photo 4. View west towards playground and parking lot from existing pathway

D:\30714_05

SOURCE: ESA, 2018

Maxwell Farms Regional Park Master Plan Update

Figure 4b
Representative Photographs (cont.)



Photo 5. View east along Back Meadow Trail at Bay Tree Trail junction



Photo 6. View south towards nature trail junction from Three Meadow Trail

SOURCE: ESA, 2018

Maxwell Farms Regional Park Master Plan Update

Figure 4c
Representative Photographs (cont.)

The remaining, more natural portion of the park extends west and south from the urbanized area, and is characterized by formal and informal pathways winding through a varied patchwork of open meadows, wooded areas with open understory, and densely vegetated riparian areas. In this portion of the park, development and landscape modifications, with the exception of earthen trails, are generally inconspicuous, and the above-noted vegetation communities are the prominent and defining scenic landscape characteristics. Representative views for this portion of the park are presented in Figure 4c, Photos 5 and 6.

Views of the Project area from public areas beyond the park boundaries are limited. Views from the north are generally limited to those of motorists traveling along Verano Avenue, as there is no sidewalk along most of the park's northern boundary or other notable public areas from which the park is visible (see for example, Figure 4a, Photo 1). Views from the east are similarly limited to those of travelers along S.R. 12, which does have a sidewalk, but otherwise lacks notable public areas from which the park is visible. Vegetated berms rising above the road elevation extend along most of the park's northern and western boundaries. Further, most of the urbanized portion of the park is at an elevation below that of the berm crest and roadway elevations (see for example, Figure 4b, Photo 3). As a result, views into the park and of park facilities from the north and west are highly constrained. For the above reasons, there are no scenic vistas of, or within the park.

As noted in Section 1.4.2, Existing Park Features and Operations, there is little nighttime lighting within the park. Such sources include overhead lighting from 20-foot-tall poles within portions of the parking lots; pathway lighting along paved pathways between the parking lot and the Boys and Girls Club; and security lighting for the Boys and Girls Club, restroom, and ranger residence. Overhead street lighting also exists at the park entrance and the Verano Ave/S.R. 12 intersection. There is no lighting in the undeveloped portions of the park. Other sources of nighttime lighting in the Project vicinity include overhead lighting from area businesses (e.g., Maxwell Village Shopping Center) and parking lots, roadways, residences, and vehicle headlights.

a, b, c) **Less than Significant.**

Project Construction

Project construction activities would include equipment and materials staging and laydown; site preparation, consisting of existing facilities renovation, excavation, and grading; construction of new facilities; as well as landscape improvements, such as fine grading and revegetation. Construction activities would occur primarily with previously disturbed and/or developed areas of the park, including mainly within the urbanized portion of the park, but also along existing trails within the more natural portion of the park.

As noted above, there are no scenic vistas of, or within the park. Therefore, these activities would have no effect on a scenic vista. Given the above-described impediments to views from beyond the park boundaries, construction activities could be intermittently visible to people traveling along Verano Avenue or S.R. 12, but would not be conspicuous. Any such views of the work would be fleeting and indirect, as travelers would be in motion and

focused on the road ahead. Moreover, the work areas and construction materials, to the extent visible, would be subordinate in scale and extent to other developments in the area, and/or the defining characteristic of the scenic landscape – the forest.

Given the location and extent of the work, along with the nature of the scenic resources of the site, the proposed improvements would not result substantial damage to scenic resources, such as trees or meadows—work within the urbanized areas would occur within previously developed areas, and work within the more natural portion of the park would generally be limited to existing trail alignments. Nevertheless, as portions of the park beyond the active construction sites would be open to the public, construction activities could be visible to and noticeable by park visitors.

The proposed work would be completed in phases. Phase 1 would be the most intensive construction phase, with most of the work occurring on the baseball complex (field #10 only), soccer complex (large field #20 only), restroom/concessions, play and exercise area, landscaping repair/restoration, and trails. Phase 2 would involve work on the baseball complex (field #12 only), soccer complex (field #19 only) the skate park, bike skills area, and dog off-leash area. Phase 3 would involve work on the tennis, volleyball, and pickle ball courts. Driveway, parking, landscaping and restoration elements would occur among multiple phases.

As noted in Chapter 1, Project Description, construction material staging and storage are anticipated to occur entirely within the boundaries of the construction sites, which would be closed to the public during Project construction. Similarly, trail work would proceed at approximately 200 feet per day, and so would not occur within any given location for an extended period of time. Thus, views of Project construction would be mostly limited to short-range views from areas immediately surrounding the active construction sites. It is possible that people passing through the park would see construction activities through gaps in topography and vegetation; however, considering the extent of the park, and the comparatively small size of the work areas, most park visitors would not be exposed to views of the active work areas for extended periods. Given such adverse effects on the aesthetic character of the park would be temporary and generally limited to the active work areas, the impact would not be significant.

For the reasons presented, construction of the proposed master plan improvements would have no effect on a scenic vista, and less-than-significant effects related to damage to scenic resources, and changes to the park's scenic character and quality. Therefore, the impact would be less than significant.

Project Operations

The proposed Project would involve improvement to and expansion of park facilities similar in type to those presently existing onsite. All proposed improvements would occur within areas previously developed or disturbed. Upon completion of construction, disturbed areas beyond the Project footprint would be returned to their approximate pre-construction condition.

As noted previously, there are no scenic vistas of, or within the park. As a result, project operations would have no effect related to scenic vistas. Similarly, given the impediments to views from beyond the park boundaries, Project improvements would continue to be intermittently visible to people traveling along Verano Avenue. Views from travelers along S.R. 12 could become more expansive with reductions in the heights of berms along the park's eastern border. In such cases, more of the developed park area (e.g., the expanded parking area, PV arrays, soccer fields, and lighting), could become visible from the sidewalk and highway. However, these changes would not substantially affect the character or quality of existing views, as the potential view corridors would continue to be narrow, and travelers would be in motion and focused on their path of travel.

Upon completion of construction, park visitors may notice landscape changes, such as clearer delineations of park facilities (e.g., baseball fields, picnic areas), improved surfacing and wayfinding along pathways, and more deliberate and consistent landscaping. The synthetic turf would be uniform in color, texture, and coverage. Under existing conditions, the fields are only differentiated from surrounding areas via topography, fencing, or perimeter pathways. With the Project the soccer and baseball complexes would be clearly demarcated and differentiated. Players on the fields would be visible when the fields are in use, as is the case under existing conditions. Paved pathways and fencing surrounding the fields and cutting through the surrounding areas would break up the short-range views.

The proposed canopy-mounted photovoltaic (PV) solar arrays and lighting fixtures would add a dominant vertical component to the Project site, and would constitute possibly the greatest change in views from this perspective. The new 50 to 70-foot-tall poles would disrupt the views toward the sky and would add urbanized elements to the Project site that would compete for visual dominance with the natural features of the outer edges of the site. The spectator seating areas would also be visible, although they would form a relatively minor feature within these views. Although some non-native trees are proposed for removal, the tree line bordering the site would not appear noticeably different in these views as compared with the existing conditions, and the tree line would continue to screen views from the more natural southern areas of the park. The proposed restroom buildings and kiosk would also be visible and would contribute to the more developed and formalized look of the site.

These changes, in combination, would result in the urbanized portion of the park appearing more formal, structured, and developed. These changes would not be considered demonstrably adverse because they would be consistent with the existing park facilities and uses, as well as the intended purpose of this portion of the park. Similarly, with the removal of non-native vegetation; decommissioning and restoring informal trails, and expanded landscaping and tree planting, the scenic character and quality of the urban and more natural areas of the park would be improved. As noted in Section 1.4.5, Project Visitation and Operations, park operations and maintenance activities would not be substantially different than under current conditions.

The visual character of the site would also change owing to the increased use of the park and the introduction of more people and cars to the site. However, this would also not degrade the quality of the project site, since the park is intended for public use and already experiences visitors for games, practices, and other recreational uses. The change in the number of visitors would not be so great as to noticeably alter the visual character or diminish the quality of the project site.

For the reasons above, project operations would have no effect on a scenic vista, and less-than-significant effects related to damage to scenic resources, and changes to the park's scenic character and quality. Therefore, the impact would be less than significant.

- d) **Less than Significant.** The proposed Project would not include nighttime construction, and there would be no lighting required during the construction phase. Similarly, the Project would not employ construction materials with large areas of reflective surfaces. As a result, project construction would result in no lighting or glare impacts.

The PV solar arrays would be installed above the two central bays of the 50-stall east parking lot (future phase). They would face southward at an angle of 12 percent. Solar panels are designed to be absorptive, with low reflectivity and skyward orientation. Nevertheless, given their glass surfaces, the potential for glare from the solar array cannot be entirely discounted. Developments to the south of the park include the Maxwell Village Shopping Center and the Sonoma Oaks Mobile Home Park. The rear of the shopping center abuts the park boundary some 600 feet from the site of the proposed PV array, and is screened from direct view by intervening vegetation and topography. The mobile home park abuts the park boundary roughly 1,300 feet from the site of the proposed solar array, and is also screened from direct view by intervening vegetation and topography. Given the low likelihood of glare, coupled with the distance and intervening vegetation and topography between the proposed PV array and adjacent properties, the Project would have a less-than-significant effect related to the creation of a new source of glare which would adversely affect daytime or nighttime views.

New nighttime lighting would be installed in the parking area, baseball fields, soccer fields, and tennis and pickle ball courts, and some pathways. All lighting would be controlled by an automated control system. Parking lot lights and security lighting on the buildings would be on from dusk to dawn. All pathway, field and court lighting would be turned off at 10:00 p.m.

New lighting for the entire parking area would include approximately twenty-nine 25-30-foot poles, each mounted with 50-watt LED fixtures. Fixtures would be fully cutoff and fully shielded to limit lighting in a downward direction. Lighting in the parking bays covered by the PV arrays would be provided by light fixtures mounted to the canopy.

New lighting for the baseball complex would include ten 70-foot poles, each mounted with six 470-watt LED fixtures. At baseball field No. 10, outfield lights would face west/northwest, one infield light would face south, and the other infield light would face

northeast; the average foot-candle illuminance would be about 30.¹ At baseball field No. 12, outfield lights would face north, one infield light would face south west, and the other would face southeast; the average foot-candle illuminance would be about 35. Per field, all four light installations would be turned on during night time regulation play (LPP, 2018).

New lighting for the soccer complex would include approximately six 70-foot poles mounted with 700-watt LED fixtures (lighting would vary from four to 16 fixtures per pole depending upon location, total number of fixtures would be 56). Two light poles would be installed on the west side of the small soccer field (No. 19), two light poles would be installed between the two soccer fields, and two light poles would be installed on the east side of the large soccer field (No. 20). The average foot-candle illuminance for the soccer fields would be about 31 (LPP, 2018).

New lighting for the pickle ball and tennis courts would include approximately eleven 50-foot poles, each mounted with a total of thirty 350-watt LED fixtures (lighting would vary from two to four fixtures per pole, depending upon location. Two poles would be installed north of the pickle ball court and would face southward. Two poles would be installed south of the pickle ball court and would face northward. All other poles would be installed between tennis courts and would face eastward and westward. The average foot-candle illuminance for the pickle ball courts would range from about 40 to 50, while that of the tennis courts would range from about 30 to 35, depending upon location (LPP, 2018).

The proposed Project lighting would change the park's lightscape environment. While lighting presently exists within portions of the park (e.g., parking areas), the proposed lighting would provide brighter and more expansive illumination within the urbanized portion of the park during evening hours. This, in turn, would allow for extended hours of park use, mainly during the non-summer months; the park presently closes at sunset year-round. The proposed levels of illumination would be consistent with that recommended by the National Optical Astronomy Observatory (NOAO), for public areas with dark surroundings; the light intensity would appear darker than an overcast day, but brighter than a very dark day (NOAO, 2015). As a result, the proposed lighting would not adversely affect daytime or nighttime views for park users.

This change may also be noticeable to, but would not adversely affect views from travelers along Verano Avenue and S.R. 12 or area residents. As shown on the draft Master Plan Update (Figure 2), the majority of the new lighting would be located and focused within the interior portions of the developed park area. For example, new baseball complex lighting would be located 140 feet south of Verano Avenue at its nearest point, and would be directed south, away from the road. Similarly, new soccer complex lighting would be located 270 feet west of S.R. 12 at its nearest point, and

¹ Foot-candle (ftcd) is a standard measurement unit for illuminance, where one ftcd is equal to one lumen of light density per square foot. The following common light levels are offered for example: direct sunlight, 10,000 ftcd; full daylight, 1,000 ftcd; overcast day, 100 ftcd; very dark day, 10 ftcd; twilight, 1 ftcd (NOAO, 2015).

would be directed west, away from the road. New tennis court lighting would be located 70 feet west of S.R. 12 at its nearest point, and would also be directed west, away from the road. The same would be true for residential areas. For example, new soccer complex lighting would be located 400 feet south of the Lazarrato Mobile Home Park at its nearest point, directed east, and new trees would be planted in the intervening area. Residential properties to the west, east, and south of the park would similarly be screened by distance, topography and vegetation.

As noted in response to questions 2.1a-c, views towards the interior of the park from adjacent roadways are generally obscured by intervening vegetation, as well as topography (e.g., berms) which may be reduced with proposed landscape modifications along the park's western border. Nevertheless, given the degree of proposed lighting intensity, the downward focus of proposed fixtures, their distance from the road, existing and proposed vegetative and topographic screening, and considering other sources of nighttime lighting in the area, the proposed Project would not adversely affect daytime or nighttime views for people traveling along area roadways, or for area residents.

For the reasons presented, the Project would have a less-than-significant effect related to the creation of a new source of light which would adversely affect daytime or nighttime views.

Cumulative Impacts

The scope and analysis for cumulative impacts on aesthetic resources encompasses the locations from which a viewer could see the proposed Project construction or operations elements along with views of other projects in the cumulative scenario. A significant cumulative effect on aesthetic resources would result if the effects of the proposed Project combined in space and time with those of cumulative projects to cause substantial degradation of the same scenic resources. A significant cumulative effect related to light and glare would result if the effects of the Project combined in space and time with those of other cumulative projects to cause substantial nuisance or hazard conditions on the same light-sensitive receptor.

The only cumulative project listed in the cumulative scenario whose impacts could combine with those of the proposed Project to cause temporary and/or permanent cumulative impacts to aesthetics resources is No. 4, Sonoma Trunk Sewer Replacement MH90-3 to MH 136-5 (see Table 2-1). None of the projects in the cumulative scenario would be expected to result in substantial increases in light or glare at the site. Therefore, there would be no cumulative effect related new sources of light or glare which would adversely affect daytime or nighttime views.

The effects associated with cumulative project No. 4 would be limited to its construction phase and confined to the sewer trunk alignment. The sewer improvements would be located below ground surface, and no long-term operational effects would occur. Given the Project site's aesthetic character, and nature and extent of scenic resources (i.e., about 35 acres of mostly urbanized landscape and roughly 50 acres of expansive meadows framed by dense woodlands), the relatively small and temporary footprint of this cumulative project would not have a substantial adverse effect on the site's aesthetic character or scenic resources. And for the reasons

described in response to questions 2.1a-c, the contribution of the proposed Project to those effects would also not be substantial. Therefore, the Project would have a less-than-significant contribution to a cumulative effect related to aesthetics.

References

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Sonoma County, 2016. Sonoma County General Plan 2020, Open Space and Resource Conservation Element. Figure OSRC-1, Scenic Resource Areas. Available at: <https://sonomacounty.ca.gov/WorkArea/DownloadAsset.aspx?id=2147541403>. Accessed October 1, 2018.

Agricultural and Forest Resources

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
2. AGRICULTURAL AND FOREST RESOURCES —				
In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.				
Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

a, b, e) **No Impact.** The Project site is not designated by either the General Plan or the Zoning Ordinance as agricultural (County of Sonoma, 2018). It is not designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance by the state (DOC, 2016), nor would the Project site conflict with a Williamson Act contract (DOC, 2013). Therefore, Project implementation would have no impact on agricultural resources.

c, d, e) **No Impact.** The Project site is not zoned or designated for forestry or timberland uses (County of Sonoma, 2018). Therefore, Project implementation would have no impact on forestry resources.

Cumulative Impacts

The Project would have no impact on agricultural or forestry resources; therefore, there would be no cumulative impact.

References

County of Sonoma, 2018. Permit Sonoma GIS, Zoning and Land Use. Available at <https://sonomamap.maps.arcgis.com/apps/webappviewer/index.html>. Accessed on April 16, 2018.

Department of Conservation, California, 2016. Sonoma County Important Farmland 2014. Available at <ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2014/son14.pdf>. Accessed on April 16, 2018.

Department of Conservation, California, 2013. Sonoma County Williamson Act FY 2013/2014. Available at ftp://ftp.consrv.ca.gov/pub/dlrp/wa/Sonoma_13_14_WA.pdf. Accessed on April 16, 2018.

Air Quality

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
3. AIR QUALITY —				
Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.				
Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

- a) **Less than Significant with Mitigation.** The Project site is within the San Francisco Bay Area (Bay Area) Air Basin, which is regulated by the Bay Area Air Quality Management District (BAAQMD) and currently designated as a nonattainment area for State and national ozone standards, State particulate matter (PM10 and PM2.5) standards, and the federal PM2.5 (24-hour) standard (BAAQMD, 2017a). The most recently adopted air quality plan to address nonattainment issues for the Bay Area is the 2017 Bay Area Clean Air Plan (2017 CAP, BAAQMD 2017b). The 2017 CAP provides a regional strategy to protect public health and protect the climate by continuing progress toward attaining all State and federal air quality standards; eliminating health risk disparities from exposure to air pollution among Bay Area communities; transitioning the region to a post-carbon economy needed to achieve greenhouse gas (GHG) reduction targets for 2030 and 2050; and providing a regional climate protection strategy to achieve those GHG reduction targets. The 2017 CAP includes 85 control measures designed to decrease emissions of the air pollutants that are most harmful to Bay Area residents, such as particulate matter, ozone, and toxic air contaminants; to reduce emissions of methane and other GHGs that are potent climate pollutants in the near-term; and to decrease emissions of carbon dioxide by reducing fossil fuel combustion (BAAQMD, 2017b).

The BAAQMD CEQA Guidelines recommend that a project's consistency with the current CAP be evaluated using the following three criteria:

- a) The project supports the goals of the Air Quality Plan;
- b) The project includes applicable control measures from the CAP; and

- c) The project does not disrupt or hinder implementation of any control measures from the CAP.

If it can be concluded with substantial evidence that a project would be consistent with the above three criteria, then the BAAQMD considers it to be consistent with air quality plans prepared for the Bay Area (BAAQMD, 2017b).

The primary goals of the 2017 CAP are to attain air quality standards, reduce population exposure and protect public health in the Bay Area, and reduce GHG emissions and protect the climate. The BAAQMD-recommended guidance for determining if a project supports the goals in the current CAP is to compare project-estimated emissions with BAAQMD thresholds of significance. If project emissions would not exceed the thresholds of significance after the application of all feasible mitigation measures, the Project would be consistent with the goals of the 2017 CAP. As indicated in the following discussion with regard to air quality impact questions 2.3b and 2.3c, the Project would result in a significant impact related to construction emissions that could be reduced to less-than-significant with implementation of Mitigation Measure AQ-1, Implement BAAQMD Basic Construction Mitigation Measures, and would not result in significant long-term operational air quality impacts. Following the implementation of Mitigation Measure AQ-1, the Project would support the primary goals of the 2017 CAP.

As noted above, the 2017 CAP contains 85 control measures aimed at reducing air pollution in the Bay Area. Projects that incorporate all feasible air quality plan control measures are considered consistent with the CAP. The 2017 CAP does not contain any measures specific to recreational fields and ancillary facilities; therefore, no inconsistency with the 2017 CAP is identified. With no specific control measures from the 2017 CAP applicable to parks, the Project would not hinder implementation of CAP control measures.

In summary, with implementation of Mitigation Measure AQ-1, the Project would be consistent with all three criteria listed above to evaluate consistency with the 2017 CAP. The project would not conflict with or obstruct implementation of the 2017 CAP after mitigation. Therefore, the impact would be less-than-significant with mitigation.

Mitigation Measures

Mitigation Measure AQ-1: Implement BAAQMD Basic Construction Mitigation Measures.

The following applicable Bay Area Air Quality Management District's (BAAQMD) Basic Construction Mitigation Measures, Regional Parks or its construction contractor shall implement the following measures to reduce emissions of fugitive dust and equipment exhaust:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.

- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked prior to the start of construction by a certified visible emissions evaluator.
- Post a publicly visible sign with the telephone number and person to contact at Regional Parks regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.

- b) **Less than Significant with Mitigation.** The Federal Clean Air Act and the California Clean Air Act both require the establishment of standards for ambient concentrations of air pollutants, called Ambient Air Quality Standards (AAQS). The federal AAQS, established by U.S. Environmental Protection Agency (USEPA), are typically higher (less stringent) or the same as the State AAQS, which are established by the California Air Resources Board (CARB) and enforced by the BAAQMD based on the Project's location.

The Bay Area Air Basin experiences occasional violations of ozone and particulate matter (PM10 and PM2.5) standards. Therefore, the Project area is located in an air basin that is currently designated as a non-attainment area for violation of the state 1-hour and 8-hour ozone standards, the federal ozone 8-hour standard, the State respirable particulate matter (PM10) 24-hour and annual average standards, the State fine particulate (PM2.5) annual average standard, and the federal PM2.5 24-hour standard. The Project area is designated as attainment or maintenance for all other State and federal standards (BAAQMD, 2017a).

Project Construction

Construction activities associated with the Project would involve use of off-road equipment that would emit exhaust containing ozone precursors (reactive organic gases, or ROG; and nitrogen oxides, or NOx). On-site and off-site vehicle activity associated with material transport and construction worker commutes would also generate emissions. Emission levels for these activities would vary depending on the number and types of equipment used, duration of use, operation schedules, and the number of

construction workers. Criteria pollutant emissions of ROG and NO_x from these emission sources would incrementally add to the regional atmospheric loading of ozone precursors during Project construction.

Air pollutant emissions of ROG, NO_x, PM₁₀, and PM_{2.5} that would be generated by off-road construction equipment (e.g., excavators, graders, loaders) were estimated using the California Emissions Estimator Model (CalEEMod) version 2016.3.2. As detailed plans for each Master Plan Update project have not been prepared, a Project-specific construction schedule and list of construction equipment is not available. Accordingly, modeling inputs are based on standard construction assumptions and phase durations for a new urban park of a size similar to that of the proposed Project's construction footprint.

Project construction emissions were modeled under the assumption that construction would begin in May 2019 and end in May 2022 over three phases. Each phase of construction is assumed to occur over a one-year period (e.g., May 2019 to May 2020). It was assumed that construction would result in 20 one-way worker trips per day. The number of one-way haul trips per construction phase was derived using the volume quantities of exported and imported material presented in Table 2-1 and assuming each haul truck can carry 16 cubic yards of material per trip. Average daily construction emissions were estimated by dividing the total construction emissions by the number of workdays. All assumptions and calculations used to estimate the Project-related construction emissions are provided in Appendix A. Estimated average daily emissions are shown in **Table 2-2** and are compared to the BAAQMD thresholds.

TABLE 2-2
AVERAGE DAILY CONSTRUCTION-RELATED POLLUTANT EMISSIONS (POUNDS/DAY)

Construction Year	ROG	NO _x	Exhaust PM ₁₀ *	Exhaust PM _{2.5} *
2019	3.6	52.4	1.4	1.3
2020	3.2	48.4	1.2	1.1
2021	2.9	43.2	1.0	1.0
2022	2.1	31.7	0.7	0.7
<i>BAAQMD Construction Threshold</i>	54	54	82	54
Significant Impact?	No	No	No	No

* BAAQMD's construction-related significance thresholds for PM₁₀ and PM_{2.5} apply to exhaust emissions only and not to fugitive dust.

As indicated in Table 2-2, the average daily construction exhaust emissions would not exceed the BAAQMD's significance thresholds. Therefore, impacts associated with the potential for construction-related exhaust emissions to result in or contribute to a violation of an air quality standard would be less than significant.

In addition to exhaust, emissions of fugitive dust would also be generated by construction activities associated with grading and earth disturbance, and travel on paved and unpaved

roads. Such emissions could result in a significant impact. With regard to fugitive dust emissions, the BAAQMD Guidelines focus on implementation of recommended dust control measures rather than a quantitative comparison of estimated emissions to a significance threshold. For all projects, the BAAQMD recommends the implementation of its Basic Control Mitigation Measures (BAAQMD, 2017c). The implementation of the BAAQMD's Basic Construction Mitigation Measures, which are listed in Mitigation Measure AQ-1 would reduce potential impacts associated with fugitive dust emissions to a less-than-significant level.

Project Operation

Project site development would result in an increase in criteria air pollutant and precursor emissions—such as ROG, NO_x, PM₁₀, and PM_{2.5}—from a variety of emissions sources, including onsite area sources (e.g., Landscaping Equipment), energy (i.e., associated with nighttime lighting) and mobile on road sources (i.e., average daily trips as a result of increased park visitation). Exhaust emissions from on-road vehicle traffic were calculated using the latest version of the CalEEMod program.

Table 2-3 summarizes the average daily mobile, energy, and area emissions of criteria pollutants that would be generated by the Project's implementation, and compares the emissions to BAAQMD thresholds. **Table 2-4** summarizes the annual emissions from Project operations. As indicated in Tables 2-3 and 2-4, project-related net operational emissions of ROG, NO_x, PM₁₀, and PM_{2.5} would not exceed the BAAQMD significance thresholds during operations and thus the Project would have a less-than-significant impact in relation to regional operational emissions.

TABLE 2-3
MAXIMUM DAILY OPERATIONAL POLLUTANT EMISSIONS (POUNDS/DAY)

Category	ROG	NO _x	PM ₁₀	PM _{2.5}
Area	<0.1	<0.1	<0.1	<0.1
Energy	<0.1	<0.1	<0.1	<0.1
Mobile	1.3	6.4	3.0	0.9
BAAQMD Construction Threshold	54	54	82	54
Significant Impact?	No	No	No	No

TABLE 2-4
ANNUAL OPERATIONAL POLLUTANT EMISSIONS (TONS/YEAR)

Category	ROG	NO _x	PM ₁₀	PM _{2.5}
Area	<0.1	<0.1	<0.1	<0.1
Energy	<0.1	<0.1	<0.1	<0.1
Mobile	<0.1	0.4	0.2	<0.1
BAAQMD Construction Threshold	54	54	82	54
Significant Impact?	No	No	No	No

- c) **Less than Significant with Mitigation.** In developing thresholds of significance for air pollutants, BAAQMD considered the emission levels at which a project's individual emissions would be cumulatively considerable. If a project would result in an increase in ROG, NO_x, PM₁₀, or PM_{2.5} of more than its respective average daily emissions significance thresholds, then it would also contribute considerably to a significant cumulative impact. If a project would not exceed the significance thresholds, its emissions would not be cumulatively considerable. As presented in response to question 2.3b, above, the Project's short-term construction exhaust emissions would not exceed the applicable significance thresholds and, with the implementation of Mitigation Measure AQ-1, the Project's fugitive dust emission-related impacts also would be reduced to a less-than-significant level. In addition, as shown in Table 2-3, criteria pollutant emissions generated during Project operation would not exceed the applicable significance thresholds. For these reasons, the Project's construction-related emissions would not be cumulatively considerable after implementation of mitigation, and the Project's operational emissions would not be cumulatively considerable without mitigation. Therefore, the Project would have a less-than-significant cumulative effect related to air quality.
- d) **Less than Significant.** The BAAQMD recommends that lead agencies assess the incremental toxic air contaminant (TAC) exposure risk to all sensitive receptors (e.g., residences, schools) within a 1,000-foot radius of a project's fence line (BAAQMD, 2017a). There are residential land uses within 1,000 feet from the Project's northern, southern, eastern and western boundary. Once Project construction is complete, the Project would not introduce any new sources of TAC emissions (e.g., generators, gas stations, etc.) within the Project area. Therefore, health risk impacts related to Project operation would be less than significant.

Short-term Project construction activities would generate diesel particulate matter (DPM), which is considered to be a TAC. The majority of DPM exhaust emissions that would be generated during construction would be from the use of diesel off-road equipment with a smaller amount generated by the use of heavy duty trucks to deliver building material and equipment to the site.

The dose to which receptors are exposed is the primary factor affecting health risk from exposure to TACs. Dose is a function of the concentration of a substance or substances in the environment and the duration of exposure to the substance. According to the Office of Environmental Health Hazard Assessment (OEHHHA), health risk assessments should be based on a 9, 30, and/or 70-year exposure periods to determine the health risk to sensitive receptors from cancer or chronic non-cancer health effects of TAC emissions (such as DPM). As explained in the BAAQMD's *CEQA Air Quality Guidelines*; "Due to the variable nature of construction activity, the generation of TAC emissions in most cases would be temporary, especially considering the short amount of time such equipment is typically within an influential distance that would result in the exposure of sensitive receptors to substantial concentrations. Concentrations of mobile-source diesel PM emissions are typically reduced by 70 percent at a distance of approximately 500 feet. In addition, current models and methodologies for conducting health risk assessments are

associated with longer-term exposure periods of 9, 40, and 70 years, which do not correlate well with the temporary and highly variable nature of construction activities. This results in difficulties with producing accurate estimates of health risk” (BAAQMD, 2017c).

Project construction would require the operation of a small number of off-road equipment, primarily for grading of parking areas and recreational fields and paving of parking areas. Additionally, a number of federal and State regulations require cleaner off-road equipment. Specifically, both the USEPA and CARB have set emissions standards for new off-road equipment engines, ranging from Tier 1 to Tier 4. Tier 1 emission standards were phased in from 1996 to 2000, and Tier 4 interim and final emission standards for all new engines have been phased in since 2015. Although the full benefits of these regulations will not be realized for several years as fleet equipment turns over, the USEPA estimates that by implementing the federal Tier 4 standards DPM emissions are reduced by more than 90 percent (USEPA, 2004). Consequently, in recognition of emission improvements to the State-wide fleet of off-road equipment, the small number of equipment required, and the limited duration of exposure, DPM emissions from construction activity are not expected to result in exposure of sensitive receptors to substantial pollutant concentrations. The impact related to exposing sensitive receptors to substantial pollutant concentrations would, therefore, be less than significant.

- e) **Less than Significant.** The BAAQMD has identified typical sources of odor in the BAAQMD 2017 CEQA Air Quality Guidelines, a few examples of which include manufacturing plants, rendering plants, coffee roasters, wastewater treatment plants, sanitary landfills, and solid waste transfer stations (BAAQMD, 2017c).

During construction, diesel powered equipment may create localized odors. These odors would be temporary and given the distance between construction areas and nearby uses (which would vary depending on where construction is occurring onsite, but would be no less than 140 feet) would not be noticeable for extended periods of time outside of the Project boundaries. The occasional whiff of diesel exhaust is anticipated near construction sites, but is not considered a significant odor source.

The Project’s operations would not include uses that have been identified by BAAQMD as potential sources of objectionable odors, such painting/coating operations, chemical manufacturers, food processing facilities, etc. Accordingly, no odor impacts would result from project operations. For the reasons described above, Project implementation would have a less-than-significant impact related to the creation of objectionable odors.

Cumulative Impacts

The geographic context for changes in the air quality environment due to development of the Project would be both regional and local. Ozone and particulates would be the primary pollutants of concern, and the cumulative context would comprise the SFBAAB, which includes a multitude of projects listed in Table 2-1.

The only cumulative project listed in the cumulative scenario whose TAC impacts could combine with those of the proposed Project to cause temporary and/or permanent cumulative TAC impacts is No. 4, Sonoma Trunk Sewer Replacement MH90-3 to MH 136-5 (see Table 2-1). The effects associated with cumulative project No. 4 would be limited to its construction phase and would generally occur in the immediate vicinity of the sewer trunk alignment. As described above under Air Quality checklist question 2.3d, the Project would not result in TACs from construction that would result in significant health risk at the nearest sensitive receptors. Given the potential areas of overlap in timing and geography of construction for these two projects would be small, and considering the notable distance between these areas of potential overlap and the nearest sensitive receptors (roughly 600 feet), the combined health risk effects of these projects would not be significant. In addition, since the Project consists of the improvement of a regional park, the Project would not be a source of substantial TACs during operations. For these reasons, the Project would have a less-than-significant contribution to cumulative health risk impacts.

According to the BAAQMD, no single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards for regional criteria pollutants. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. There are many projects throughout the Bay Area Air Basin that have been identified as having significant and unavoidable operational and construction-related regional pollutant impacts. Consequently, for assessment of cumulative regional pollutant impacts, BAAQMD has developed a methodology of assessing whether a project would have a cumulatively considerable contribution. According to the BAAQMD *CEQA Air Quality Guidelines*, if a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions (BAAQMD, 2017c). As described above for checklist questions 2.3b and 2.3c, Project operational emissions of ROG, NO_x, PM_{2.5} and PM₁₀ would not exceed the BAAQMD significance thresholds. Therefore, Project emissions of ROG, NO_x, PM_{2.5} and PM₁₀ would have a less-than-significant contribution to cumulative air quality impacts.

References

- Bay Area Air Quality Management District (BAAQMD), 2017a. Air Quality Standards and Attainment Status. Available at: <http://www.baaqmd.gov/research-and-data/air-quality-standards-and-attainment-status>, last updated January 1, 2017.
- BAAQMD, 2017b. Spare the Air: Cool the Climate – Final 2017 Clean Air Plan, adopted April 19.
- BAAQMD, 2017c. California Environmental Quality Act – Air Quality Guidelines, May 2017.
- Office of Environmental Health Hazard assessment (OEHHA), Air Toxics Hotspot Program, Risk Assessment Guidelines - Guidance Manual for Preparation of Health Risk Assessments, February.
- U.S. Environmental Protection Agency (USEPA), 2004. Clean Air Nonroad Diesel Rule: Fact Sheet. May 2004.

Biological Resources

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
4. BIOLOGICAL RESOURCES — Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

Approach to Analysis

To analyze the impacts of the Project, ESA (1) reviewed available biological resource surveys of the Project site and relevant surrounding vicinity as the overall study area for this analysis; (2) reviewed special-status species² lists for this study area derived from the California Natural Diversity Database (CNDDDB), the U.S. Fish and Wildlife Service (USFWS), the California Department of Fish and Wildlife (CDFW), and the California Native Plant Society (CNPS); and, (3) performed a field reconnaissance of the Project site on April 9, 2018 to record current site conditions. These approaches were combined to describe the potential presence of sensitive and regulated biological resources in the Project area. Surveys verified the occurrence or absence of

² The term “special-status species” is an informal term-of-art that recognizes a species’ rarity or vulnerability to habitat loss or population decline. Some of these species receive specific protection from federal or state endangered species legislation, while others are designated as “sensitive” on the basis of adopted policies and expertise of state resource agencies; organizations with acknowledged expertise; or policies adopted by local governmental agencies such as counties, cities, and special districts to meet local conservation objectives. In addition, the California Department of Fish and Wildlife has identified “Sensitive Natural Communities” based on standardized scoring of their rarity and threats to these communities. Natural Communities with ranks of S1 to S3 are considered Sensitive Natural Communities to be addressed in the environmental review processes of CEQA and its equivalents.

habitat for special-status species in the Project area, and the resulting potential for species' occurrence and potential Project impacts. The findings of these database searches, species lists, and field surveys were used to compile the list of special-status species that may occur at the Project site (Appendix B) and to characterize the Project setting, described below.

Vegetation Communities

Vegetation communities in the Project area include the following:

Non-native Annual Grassland. Annual grassland occurs along the perimeter of the baseball field, parking lot, and other facilities in Maxwell Farms Regional Park, and in open areas within the undeveloped conservation area. Grassland areas are dominated by non-native grass, forb and herb species including slender oat (*Avena barbata*), Italian rye grass (*Festuca perennis*), ripgut brome (*Bromus diandrus*), soft brome (*Bromus hordeaceus*), Italian thistle (*Carduus pycnocephalus*), spring vetch (*Vicia sativa*), and curly dock (*Rumex crispus*). Non-native annual grassland is not regulated by CDFW as a sensitive vegetation community.

Developed/Landscaped. Developed and landscaped areas include the sport fields and courts, playground, parking lots, structures and medians in the park, as well as paved trails. Vegetation in developed areas includes primarily ornamental species, such as oleander (*Nerium oleander*), and also includes native trees, such as valley oak (*Quercus lobata*). Landscaped areas also contain the non-native grassland species described above; most are regularly mowed. Landscaped areas are not regulated as a sensitive vegetation community.

Riparian Woodland. Riparian woodland occurs along the banks of Sonoma Creek within the park. This riparian woodland is dominated by a naturalized species of the California black walnut (*Juglans* sp.), box elder (*Acer negundo*), and willow (*Salix* sp.). The understory includes greater periwinkle (*Vinca major*), Himalayan blackberry (*Rubus armeniacus*), poison oak (*Toxicodendron diversilobum*), and other species. Riparian woodland provides habitat for many species of nesting birds, as well as roosting bats, rodents, reptiles and amphibians. Riparian woodland is considered a sensitive vegetation community by CDFW, and substantial riparian zone modifications typically require a Streambed Alteration Agreement pursuant to California Fish and Game Code Section 1602.

Seasonal Wetland. The federal government defines and regulates waters, including wetlands, in Section 404 of the Clean Water Act (CWA). Wetlands are “areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support (and do support, under normal circumstances) a prevalence of vegetation typically adapted for life in saturated soil conditions” (33 CFR 328.3[b] and 40 CFR 230.3). The U.S. Army Corps of Engineers (USACE) has primary federal responsibility for administering regulations that concern waters of the U.S. and requires a permit under CWA Section 404 if a project proposes the discharge of fill and/or the placement of structures within waters of the U.S. (U.S. Army Corps, 1987).

Seasonal wetlands are features that are only ponded for a short period of time each year. They support a mix of wetland-obligate and facultative plants and upland plant species, including ripgut brome, false barley (*Hordeum murinum*), Harding grass (*Phalaris aquatica*) and cranesbill

(*Geranium dissectum*). Seasonal wetlands may occur naturally or as a result of disturbance and altered drainage patterns. These features are potentially jurisdictional waters. Seasonal wetlands are considered a sensitive natural community. Existing trails that would be improved by the Project traverse meadow habitat that supports seasonally wet grassland areas, which may support jurisdictional seasonal wetlands. No modifications are proposed to seasonal wetlands in the Project area. The stabilization of creek access points within the top-of-bank of Sonoma Creek would occur outside of the USACE jurisdiction.

Aquatic. Sonoma Creek in the Project area is a perennial stream with a riparian canopy and understory that provides important wildlife habitat and movement corridors, and discharges into San Pablo Bay. This waterway provides habitat for the federally-listed steelhead and California freshwater shrimp.

Special-Status Species

Many of the special-status species identified by database searches are associated with vernal pool habitats or other specialized natural communities that do not occur within Maxwell Farms Regional Park and are not associated with Sonoma Creek. These species have little to no potential for occurrence and are not individually addressed. Those special-status species identified in such searches are identified in Appendix B. Three special-status wildlife species are known from Sonoma Creek: California freshwater shrimp (*Syncaris pacifica*), steelhead (*Oncorhynchus mykiss*), and Pacific lamprey (*Entosphenus tridentatus*) (CDFW, 2018). The following special-status wildlife species also have moderate potential to occur: western pond turtle (*Actinemys marmorata*), pallid bat (*Antrozous pallidus*), and long-legged myotis (*Myotis volans*), along with common roosting bats, and nesting birds. In addition, the California red-legged frog (*Rana draytonii*) is discussed below due to local populations in the hills west of Sonoma Valley; however, this species is not expected in the Project area. One special-status plant species, hayfield tarplant (*Hemizonia congesta* ssp. *congesta*), has moderate potential to occur based on the presence of potentially suitable habitat. No federally-listed plants are expected in the Project area. See Appendix B for more information on these species. These species are individually discussed below.

California Freshwater Shrimp (*Syncaris pacifica*)

California freshwater shrimp is a State and federally-listed endangered species. No critical habitat has been designated for this species. California freshwater shrimp are found in low elevation (generally less than 380 feet), low gradient (generally less than 1 percent), freshwater, perennial streams in isolated locations within Marin, Napa, and Sonoma counties, California. Freshwater shrimp utilize pools and glides in low-gradient streams that have moderately undercut banks, sandy substrate, and exposed roots from bankside vegetation. During the winter, habitat includes shallow margins of stream pools containing undercut banks and exposed living fine-root material that provide shelter and refuge from high water velocities associated with winter storm events. During summer, California freshwater shrimp are often associated with submerged leafy branches. Existing populations are threatened by introduced fish, deterioration or loss of habitat from water diversion, impoundments, livestock and dairy activities, agricultural activities and development, flood control, gravel mining, timber harvesting, migration barriers, and water

pollution (USFWS, 1998 and 2011). California freshwater shrimp may be present in Sonoma Creek within the Project area throughout the year.

Steelhead – Central California Coast DPS (*Oncorhynchus mykiss*)

The Central California Coast steelhead Distinct Population Segment is federally listed as threatened. This species may be resident in streams (non-migratory, often referred to as rainbow trout) or may migrate to the open ocean (anadromous). Steelhead may return to the ocean after spawning and return to freshwater to spawn one or more times. Eggs (laid in gravel nests called redds), alevins (gravel dwelling hatchlings), fry (juveniles newly emerged from stream gravels), and young juveniles all rear in freshwater until they become large enough to migrate to the ocean to finish rearing and maturing to adults. In coastal California, steelhead usually live in freshwater for one to two years, then spend an additional one or three years in the ocean before returning to their natal stream to spawn. Steelhead select spawning sites with gravel substrate and with sufficient flow velocity to maintain circulation through the gravel and provide a clean, well-oxygenated environment for incubating eggs. Steelhead fry generally rear in edgewater habitats and move gradually into pools and riffles as they grow larger (Bell, 1991). Steelhead may migrate through the reach of Sonoma Creek in the Project area in the winter months, and juvenile fish may be present throughout the year.

Pacific lamprey (*Entosphenus tridentatus*)

The Pacific lamprey is identified as a species of special concern by CDFW. This anadromous, eel-like fish is native to the Pacific coast. They spawn in freshwater between March and July in habitat similar to salmon: gravel-bottomed streams in riffle habitat. Juvenile fish migrate to the marine environment in fall, where they are parasitic and feed on fish including Pacific salmon, flatfish, rockfish, and pollock in nearshore and deep ocean. After one to three years in the ocean, Pacific lampreys migrate to freshwater between February and June. They are thought to overwinter and remain in freshwater habitat for approximately one year before spawning. Post-spawning adults have been observed several miles upstream of the Project area in Sonoma Creek.

Western pond turtle (*Actinemys marmorata*)

The Pacific (western) pond turtle is also identified as a species of special concern by CDFW. This species is normally associated with permanent ponds, lakes, streams, irrigation ditches or permanent pools along intermittent streams. Two distinct habitats may be used for oviposition: 1) along large slow-moving streams, in which eggs are deposited in nests constructed in sandy banks; and 2) along foothill streams, where females may climb hillsides, sometimes moving considerable distances to find a suitable nest site. This species is not reported by the CNDDDB in Sonoma Creek, but is expected to be present based on its cosmopolitan distribution and the presence of suitable habitat in the creek. Pond turtles are not expected in the Project area outside of the riparian corridor due to the absence of egg-laying substrate in these areas.

California red-legged frog (*Rana draytonii*)

The California red-legged frog is federally listed as a threatened species throughout its range in California and is a CDFW species of special concern. This frog historically occurred over much of the state from the Sierra Nevada foothills to the coast and from Mendocino County to the

Mexican border. They typically inhabit ponds, slow-moving creeks, and streams with deep pools that are lined with dense emergent marsh or shrubby riparian vegetation. Submerged root masses and undercut banks are important habitat features for this species. However, this species is capable of inhabiting a wide variety of perennial aquatic habitats as long as there is sufficient cover and bullfrogs or non-native predatory fish are not present. California red-legged frogs are known to survive in ephemeral streams, although only if deep pools with vegetative cover persist through the dry season. Factors that have contributed to the decline of this species include destruction of riparian habitat from development, agriculture, flood control practices, or competition and interactions with exotic predators such as bullfrogs, crayfish, and a variety of non-native fish. No California red-legged frog occurrences are known from ponds or streams on the floor of Sonoma Valley. The nearest documented sighting is from the Sonoma Refuse Disposal Site on Stage Gulch Road, 4 miles southwest of the Project site. Beyond that, occurrences are reported from lower Tolay Creek. This species is not resident to Sonoma Creek and based on the absence of off-channel pool or pond habitat in the local project vicinity, is considered unlikely in the Project area.

Pallid bat (*Antrozous pallidus*)

The pallid bat is identified as a species of special concern by CDFW. It occurs throughout California except for the high Sierra Nevada from Shasta to Kern Counties, and the northwestern corner of the state from Del Norte and western Siskiyou Counties to northern Mendocino County. This large pale bat establishes maternity roosts in crevices in rocky outcrops and cliffs, caves, mines, hollowed trees, large tree cavities, and vacant buildings. The mature trees in and adjacent to the Project site within the Sonoma Creek riparian corridor may provide suitable roost habitat for this species.

Long-legged myotis (*Lasiurus cinereus*)

The long-legged myotis is identified as a species of special concern by CDFW. It is common in California, occurring in the coastal ranges from Oregon to Mexico. This bat species roosts in rock crevices, buildings, under tree bark, in snags, mines, and caves. Separate day and night roosts may be used and trees probably are the most important day roosts. The medium to large trees in the Sonoma Creek riparian corridor may provide suitable roost habitat for this species.

Hayfield tarplant (*Hemizonia congesta* ssp. *congesta*)

Hayfield tarplant is a CDFW California Rare Plant Rank 1B.2 species. This annual herb grows in valley and foothill grasslands and sometimes along roadsides. Several historic collections are recorded in Sonoma Valley (1909, 1910, and 1931), including in the vicinity of Maxwell Park; however, this species has not been documented in Sonoma Valley since 1931.

Nesting and migratory birds

Sonoma Creek and Maxwell Farms Regional Park provide habitat for a diversity of birds, with some species as year-round residents, other species as winter residents, and still others passing through during spring and fall migrations. Trees, shrubs, and grasslands within the Project area provide foraging and nesting habitat for a variety of birds, as well as habitat for potential use by migrants as stop-over sites. Most migratory birds are protected from harm by the federal

Migratory Bird Treaty Act and nearly all breeding birds in California are protected under the California Fish and Game Code (Section 3503). Bird species that may nest in trees and shrubs in the Project area include Cooper's hawk, American kestrel (*Falco sparverius*), red-tailed hawk (*Buteo jamaicensis*), red-shouldered hawk (*Buteo lineatus*), and great horned owl (*Bubo virginianus*), among others.

Discussion of Potential Impacts

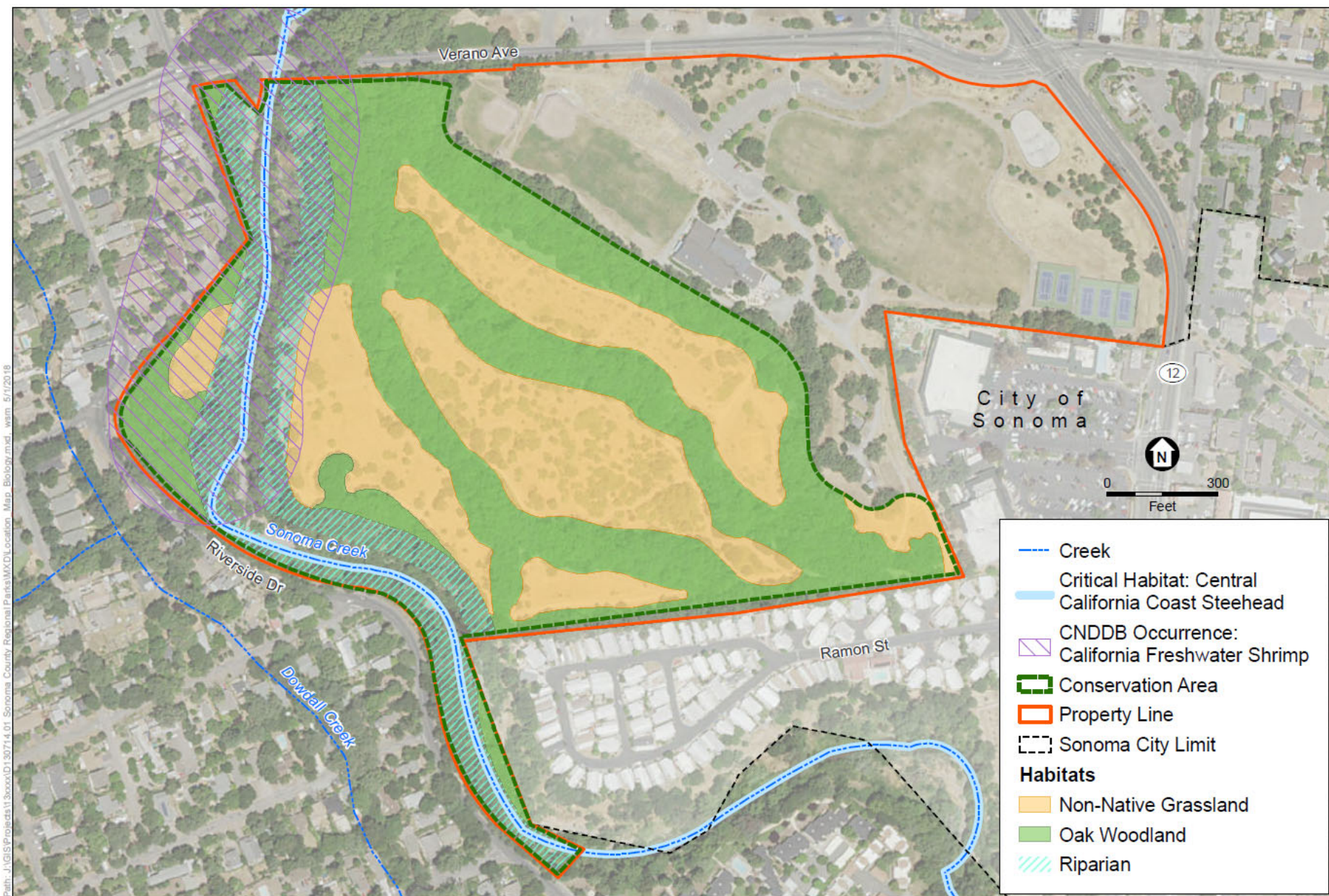
- a) **Less than Significant with Mitigation.** The known distribution of special-status biological resources in the Project area is shown on **Figure 5**. As discussed above, three special-status wildlife species are known from Sonoma Creek: California freshwater shrimp (*Syncaris pacifica*), steelhead (*Oncorhynchus mykiss*), and Pacific lamprey (*Entosphenus tridentatus*). The following special-status wildlife species also have moderate potential to occur: western pond turtle (*Actinemys marmorata*), pallid bat (*Antrozous pallidus*), and long-legged myotis (*Myotis volans*), along with other roosting bats, and nesting birds. See Appendix B for more information on these species.

Many of the special-status plants identified by in database searches are associated with vernal pool habitats or other specialized natural communities that do not occur within Maxwell Farms Regional Park and are not associated with Sonoma Creek. Of those species identified in Appendix B, only hayfield tarplant (*Hemizonia congesta* ssp. *congesta*) is considered to have moderate potential to occur.

Construction and Operational Impacts

The project could have significant adverse impacts on special-status wildlife species, if present, that occur or have a moderate or high potential to occur within or adjacent to the Project area. Areas within or next to the Project site contain suitable habitat that may support special-status wildlife species, including California freshwater shrimp, steelhead, Pacific lamprey, western pond turtle, special-status nesting and migratory birds, and special-status bats. Project implementation could have an adverse effect on these special-status species during project construction. The effects could be direct (e.g., harassment or take of an individual) or indirect (e.g., modifying existing habitat, disrupting foraging and nesting efforts, or interfering with movement). There would be no operational impacts to special-status plants or wildlife from the Project.

Construction activities required for most of the Master Plan Update elements would occur on previously developed and disturbed lands including paved areas, hardscape, and non-native grassland vegetation that do not provide habitat for special-status plant or wildlife species. Construction activities that could cause direct impacts on special-status wildlife species include ground disturbance (e.g., grading and excavation) to accommodate improved pathways and trails, new play and picnic areas, and restoration activities within the Sonoma Creek riparian corridor. These activities and potential effects would occur during each Project phase, over an approximately 34-month period.



SOURCE:

Maxwell Farms Regional Park Master Plan Update

Figure 5
Biological Resources in the Project Area

Suitable aquatic habitat for California freshwater shrimp, steelhead, and western pond turtle occurs within the Project site in Sonoma Creek. Proposed activities near sensitive habitat within the creek corridor would be restoration-based and intended to improve existing habitat. Such work in the riparian restoration zones (No. 33) includes non-native vegetation removal, informal trail eradication, and revegetating with native seeds and plants. Two access points to the creek would be improved and stabilized with wooden steps to prevent erosion and provide safe access to the creek (No. 31). No in-water work is proposed during these bank stabilization actions. Hence, the Project is unlikely to increase erosion and sediment delivery to the creek. In addition, as discussed in Section 2.9, Hydrology, implementation of measures under the mandatory NPDES Construction General Permit, including construction Best Management Practices (BMPs) outlined in the Stormwater Pollution Prevention Plan, would protect against water quality impacts that could harm aquatic species during construction. For these reasons, the Project would have no impact upon migrating or juvenile steelhead, California freshwater shrimp, or Pacific lamprey.

Activities within the creek corridor or riparian zone could encounter western pond turtle, resulting in injury or harm to individual turtles. Mitigation Measures BIO-1 (seasonal work windows), BIO-3 (contractor environmental awareness training), and BIO-4 (protection of special-status species) would reduce this potential impact to a less-than-significant level. This would be accomplished through these measures' seasonal constraints for work in sensitive portions of the Project area; mandatory training of construction crews to identify sensitive environmental resources in the Project vicinity (e.g., special-status wildlife with potential to occur onsite and adjacent sensitive habitat areas and vegetation communities); and specific protection and avoidance provisions, such as pre-construction surveys, biological monitoring, and other wildlife species protection measures.

Tree and shrub removal within the wooded portions of the park (e.g., No. 29) and riparian zone restoration activities (e.g., Nos. 31 and 33) could disturb nesting birds and roosting bats if conducted within nesting or roosting seasons. Pallid bat and long-legged myotis could roost in large valley oaks or other trees within and surrounding the Project site. Direct mortality of individual birds or bats, or disturbance to maternity colonies of special-status bats would be a significant impact. Implementing Mitigation Measures BIO-3 (Contractor Environmental Awareness Training) and BIO-5 (Nesting Birds and Roosting Bats) would reduce potential impacts on nesting birds and special-status bats to a less-than-significant level by increasing worker education regarding the potential presence and sensitivities of these species, requiring pre-construction surveys, and implementing avoidance measures if potential roosting habitat or active roosts are located.

Activities in Phase 3 including creek access improvements, trail construction, riparian restoration (Nos. 31, 32, and 33), and non-native vegetation removal (No. 29) have potential to encounter one special-status plant, hayfield tarplant. If present, the loss of individual plants would be a significant impact. The implementation of Mitigation Measure BIO-2 (Protection of Rare Plants) would reduce this impact to less than significant by identifying rare plant populations through focused surveys, and, if present, and providing for avoidance of rare plant populations.

Mitigation Measures

Mitigation Measure BIO-1: Seasonal Work Window.

Mitigation measure BIO-1 applies only to construction of enhanced creek access points (No. 31), the improved pathway from Verano bridge into the park (No. 32), and restoration of the riparian zone (No. 33).

Activities within the Sonoma Creek riparian corridor with the potential to result in short-term impacts to sensitive aquatic species, including all activities within the top-of-bank of Sonoma Creek, shall be conducted within seasonal work windows identified to reduce potential impacts on salmonids (i.e., work shall be conducted from June 15 through October 15) to the extent practicable with the exception of revegetation, which may occur year-round.

Mitigation Measure BIO-2: Protection of Rare Plants.

Mitigation measure BIO-2 applies only to construction of enhanced creek access points (No. 31), the improved pathway from Verano bridge into the park (No. 32), and restoration of the riparian zone (No. 33).

A qualified biologist shall conduct a pre-construction survey for special-status plant species with the potential to occur within the area of disturbance. The survey shall follow the procedures outlined in the California Division of Fish and Wildlife (CDFW) (2018) rare plant survey protocol.

If special-status plant species are found, Regional Parks shall attempt to avoid the plant population through project design modifications (e.g., trail relocation). If avoidance is not possible, Regional Parks shall coordinate with a qualified botanist to identify and implement, or supervise the implementation of, preservation and avoidance measures commensurate with the standards provided in applicable CDFW protocols for the affected species, including revegetation, as deemed appropriate by the qualified botanist. The preservation and avoidance measures shall include, at a minimum, appropriate buffer areas clearly marked during project activities (e.g., greater than 20 feet), monitoring by a qualified plant biologist.

Mitigation Measure BIO-3: Contractor Environmental Awareness Training and Site Protection.

Mitigation measure BIO-3 applies only to construction of enhanced creek access points (No. 31), the improved pathway from Verano bridge into the park (No. 32), and restoration of the riparian zone (No. 33).

All construction personnel working in undeveloped portions of the Project area shall attend an environmental education program delivered by a qualified biologist. The training shall include an explanation as how to best avoid the accidental take of California freshwater shrimp, western pond turtle, nesting birds and bats. The training session shall be mandatory for contractors and all construction personnel. The field meeting shall include topics on species identification, descriptions, habitat requirements and required minimization and avoidance measures.

The contractor shall provide closed garbage containers for the disposal of all trash items. Work sites shall be cleaned of litter daily. No pets, excluding service animals, shall be allowed in construction areas. Nighttime lighting, if used, shall be minimized

and directed downward. Construction hours within wooded areas and in riparian (streamside) habitat shall be limited to 8:00 a.m. to 5:00 p.m.

Mitigation Measure BIO-4: Protection of Special-Status Species.

Mitigation measure BIO-4 applies only to construction of enhanced creek access points (No. 31), the improved pathway from Verano bridge into the park (No. 32), and restoration of the riparian zone (No. 33).

Terrestrial species. Prior to commencing work, a qualified biologist shall survey the active construction footprint for western pond turtle, nesting birds, special-status bats, and other special-status species with potential to be present. Prior to clearing and grubbing activities within 150 feet of aquatic habitat, including grading, excavation, and vegetation-removal activities, a qualified biologist shall conduct a daily morning spot-check survey to identify the presence of special-status species in the area where ground disturbance or vegetation removal shall occur.

All excavated or deep-walled holes or trenches greater than one-foot deep shall be covered at the end of each workday using plywood, steel plates, or similar materials, or escape ramps shall be constructed to allow animals to exit. Before such holes are filled, they shall be thoroughly inspected for trapped animals.

If a western pond turtle is identified within the work area during construction, the monitoring biologist shall be notified, work shall cease in the vicinity of the animal, and the animal shall be allowed to relocate of its own volition.

Mitigation Measure BIO-5: Protection of Nesting Birds and Roosting Bats.

Mitigation Measure BIO-5 applies to all Project components.

Bird Protection. Tree removal and trimming activities shall occur outside of the nesting season (February 1 to August 31), to the extent feasible. If removal of scrub and riparian vegetation and trimming of trees during bird nesting season cannot be fully avoided, a qualified wildlife biologist shall conduct pre-construction nesting surveys within 7 days prior to the start of such activities or after any construction breaks of 14 days or more. Prior to any tree removal or construction in nesting season, a qualified biologist shall conduct a nesting bird survey within 250 feet of any construction site. Nesting birds with active nests in the vicinity of the construction area shall be avoided by a minimum buffer of 100 feet, or as determined by the qualified biologist in coordination with CDFW. Construction work may continue outside of the no-work buffer.

Bat Protection. A pre-construction survey for special-status bats shall be conducted by a qualified wildlife biologist in advance of tree trimming, topping or removal, to characterize potential bat habitat and identify active roost sites. Should potential roosting habitat or active bat roosts be found in trees, the following measures shall be implemented:

1. Trimming, topping or removal of trees, shall occur when bats are active, approximately between the periods of March 1 to April 15 and August 15 to October 15; outside of bat maternity roosting season (approximately April 15 to August 15) and outside of months of winter torpor (approximately October 15 to February 28), to the extent feasible.

2. If trimming, topping, or removal of trees during the periods when bats are active is not feasible and bat roosts being used for maternity or hibernation purposes are found on or in the immediate vicinity of the Project site where these activities are planned, a no-disturbance buffer of 100 feet shall be established around these roost sites until they are determined inactive by a qualified wildlife biologist. A 100-foot no disturbance buffer is a typical protective buffer distance; however, it may be modified by the qualified wildlife biologist depending on existing screening around the roost site (such as dense vegetation or a large rock formation), as well as the type of construction activity which would occur around the roost site.
3. The qualified wildlife biologist shall be present during tree trimming if bat roosting habitat or active non-maternity or hibernation bat roosts are present (e.g., daytime bachelor roosts). Trees with roosts shall be disturbed only when no rain is occurring or is forecast to occur for three (3) days and when daytime temperatures are at least 50 degrees Fahrenheit (°F). Trimming, topping or removal of trees, containing or suspected to contain non-maternity or hibernation bat roost sites shall be done under supervision of the qualified biologist and follow a two-step removal process:
 - a. On the first day of tree trimming, topping or removal and under supervision of the qualified wildlife biologist, branches and limbs not containing cavities or fissures in which bats could roost, shall be cut only using chainsaws.
 - b. On the following day and under the supervision of the qualified wildlife biologist, the remainder of the tree or structure may be removed, either using chainsaws or other equipment (e.g., excavator or backhoe).

b) **Less than Significant with Mitigation.**

Construction and Operational Impacts

Seasonal wetland and riparian woodland along Sonoma Creek are sensitive natural communities. Trail and pathway improvements within the more natural portion of the park (e.g., No. 32) and river access improvements (No. 31) in Phase 3 would occur within riparian woodland habitat. Direct, short-term impacts could include the limited removal, trimming, trampling or other damage to vegetation. Existing trails to be upgraded under the Project traverse meadows that support potentially jurisdictional seasonal wetlands, as well as oak woodland and riparian woodland communities, each of which is considered a sensitive vegetation community by CDFW. Tree and shrub removal during construction could cause direct damage to vegetation within these sensitive communities. Indirect effects during construction could include the potential spread of invasive plant species and transmission of fungal pathogens such as sudden oak death, which may harm oak trees. These impacts are potentially significant because they would degrade the quality of on-site oak woodland and riparian woodland communities.

In the long term, sensitive vegetation communities would benefit from the Project, which would remove invasive species such as Himalayan blackberry and revegetate with native species. The project also closes informal trails in the riparian zone and rectifies associated recreational damage to vegetation.

To minimize and avoid potential impacts to sensitive natural communities along Sonoma Creek, Mitigation measures BIO-6 (protection for sensitive natural communities), BIO-7 (habitat restoration and monitoring plan), and BIO-8 (avoid spread of invasive species and pathogens) are recommended. These measures would reduce the potential for such impact to a less-than-significant level by providing for the identification and avoidance of sensitive natural communities during staging and project activities, revegetating disturbed sensitive habitat according to a Habitat Restoration and Monitoring Plan, and implementing measures to minimize the introduction of noxious weeds and spread of plant pathogens during construction.

Mitigation Measures

Mitigation Measure BIO-6: Protection for Sensitive Natural Communities.

Prior to final Project design, a qualified biologist shall perform a habitat assessment to verify the distribution of sensitive natural communities, including wetlands, within the Project footprint. Based on survey findings, the area of impact in sensitive natural communities shall be minimized by siting construction staging and access areas outside sensitive natural communities and by utilizing previously-disturbed areas in upland habitat for staging. Staging within seasonal wetland and riparian habitats shall be avoided. No construction activities, parking, or staging shall occur outside of designated areas.

During construction, as much native understory vegetation and as many trees as possible will be retained. All trees to remain during construction within the grading area will be flagged for avoidance, and trimmed if necessary to ensure their trunks and/or limbs to not get disturbed during construction. Certified weed-free permanent and temporary erosion control measures shall be implemented to minimize erosion and sedimentation during and after construction.

Temporary impacts on sensitive natural communities shall be restored by revegetation with native species. Revegetated areas shall be monitored for a five-year period to ensure success, according to the Habitat Restoration and Monitoring Plan described in Mitigation Measure BIO-7.

Mitigation Measure BIO-7: Habitat Restoration and Monitoring Plan.

Mitigation Measure BIO-7 applies to construction of enhanced creek access points (No. 31), the improved pathway from Verano bridge into the park (No. 32), restoration of the riparian zone (No. 33), and all non-paved trail improvement and stabilization work.

If sensitive vegetation communities are removed during the Project, Regional Parks shall prepare a Habitat Restoration and Monitoring Plan for restoration of sensitive vegetation following construction activities. This plan shall include protocols for replanting of vegetation removed prior to or during construction, and management and monitoring of the plants to ensure replanting success. Areas impacted from construction-related activity shall be replanted or reseeded with native trees, shrubs, wetland vegetation, and herbaceous species under guidance from a qualified biologist.

To the extent feasible, local plant materials shall be used for revegetation of the disturbed area. This will ensure that the seeds can be collected during the appropriate season and the container plants will be of an appropriate size for out-planting. The monitoring plan shall include annual monitoring for 5 years. The plan shall contain protocols for vegetation management, protocols for monitoring replanting success, and specify thresholds for and descriptions of adaptive management measures to be implemented if success criteria are not being met. The adaptive management measures may include weed control or additional replanting, among other strategies.

The Habitat Restoration and Monitoring Plan shall also address restoration of jurisdictional wetlands and waters. Temporary impacts to wetlands shall be restored onsite with native wetland species under guidance from a qualified biologist. Any permanent impacts to jurisdictional wetlands shall be mitigated by replacement on- or off-site at a 1:1 ratio or as otherwise required by a regulatory agency with jurisdiction.

The Habitat Restoration and Monitoring Plan shall at a minimum:

- Include photo points to document pre-project wetland, riparian, and/or stream conditions (as appropriate to impacted habitats) in the work area and to gauge restoration success over time.
- Identify the native plants to be used for restoration and the replacement ratio, establish success criteria and a monitoring schedule, and develop a contingency plan if restoration goals are not met within three years.
- Identify temporarily impacted areas are returned to pre-project conditions or greater.
- Ensure that no significant undercutting, scour or erosion is present within, upstream, or downstream of the work area at Sonoma Creek.
- Ensure that replacement plantings, if used, have a minimum 70% survival rate.
- Provide that the Project site is not dominated by invasive vegetation.

Mitigation Measure BIO-8: Avoid Spread of Invasive Species and Pathogens.

Mitigation Measure BIO-8 applies to construction of enhanced creek access points (No. 31), the improved pathway from Verano bridge into the park (No. 32), restoration of the riparian zone (No. 33), and all non-paved trail improvement and stabilization work.

- All vehicles and equipment entering each Project site shall be clean of noxious weeds and pathogens to minimize their spread within the site and from outside the Project site. All construction equipment shall be washed thoroughly to remove all dirt, plant, and other foreign material prior to entering the Project sites. Equipment found operating on the Project that has not been properly washed prior to site entry shall be shut down and removed from the site.
- If potted plants are needed for site restoration, nursery operations where plants are stored, propagated, or purchased must certify implementation of best management practices to reduce pest and pathogen contamination within their nursery.

- Disturbed and decompacted areas beyond the footprints of the proposed improvements and restoration areas shall be revegetated with locally native vegetation. Revegetated areas shall be protected and tended, including watering when needed.
- c) **Less than Significant with Mitigation.** Proposed earthen and stabilized trail improvements, as well as part of the improved pathway from Verano bridge (No. 32) that would be routed in the conservation area, could cross seasonally wet grassland features that may support jurisdictional seasonal wetlands. The enhanced creek access points and trails (No. 31) and riparian restoration zones (No. 33) also occur within waters of the State below the top-of-bank of Sonoma Creek. Although wetland impacts associated with trail improvements and routing would be minimized by limiting work to areas along existing trail alignments, it may not be possible for the trail improvement work to completely avoid impacting these wetland features. Because the trail improvements have not been designed, the amount of wetland or other waters of the U.S. that will be directly impacted by the Project is not known. Implementation of Mitigation Measures BIO-6, BIO-7, and BIO-9 would reduce the potential for significant construction impacts on wetlands to a less-than significant level. This would be accomplished through pre-construction wetland delineation, avoidance through Project design modification, restoration, and/or further mitigation in consultation with the regulatory agency with jurisdiction, as appropriate.

Mitigation Measures

Mitigation Measure BIO-9: Wetland Delineation, Mitigation and Monitoring.

Mitigation Measure BIO-9 applies to enhanced creek access points (No. 31), the improved pathway from Verano bridge into the park (No. 32), restoration of the riparian zone (No. 33), and all non-paved trail improvement and stabilization work.

Following the habitat assessment survey required under Mitigation Measure BIO-6, if wetland impacts are anticipated and cannot be avoided, Regional Parks shall conduct a formal wetland delineation according to the USACE protocol and regional supplement to delineate all potentially jurisdictional wetlands and other waters in the Project area. Following the identification of jurisdictional areas, if the Project can be modified to avoid potential wetland features, then no further action is needed to mitigate for wetland impacts. If jurisdictional areas cannot be avoided, then Regional Parks shall consult with the appropriate regulatory agencies with jurisdiction (i.e., USACE, CDFW, RWQCB) to determine whether permits or other authorizations would be required. Regional Parks shall proceed in accordance with the determinations of the agencies with jurisdiction, including by applying for and obtaining any necessary approvals prior to project implementation. If deemed necessary for Project implementation, the subject permits/authorizations would specify the amount of wetland to be impacted and include conditions for construction, restoration, and mitigation. Wetlands impacted by the Project shall be mitigated at a ratio of not less than 1:1. Any required restoration shall be provided through the Habitat Restoration and Monitoring Plan described in Mitigation Measure BIO-7.

- d) **Less than Significant Impact.** The Project would not interfere substantially with the movement of any native resident or migratory fish, or any native resident or migratory wildlife species during construction or operations. Construction within the top-of-bank of Sonoma Creek would occur within seasonally restricted work windows when sensitive aquatic species are confined to the Sonoma Creek low-flow channel, outside of the Project area, and work would be limited to one side of the stream bank. Creek flow would not be impeded and work would be limited to daytime hours. Thus, wildlife could continue to use movement corridors within the creek channel and there would be a less-than-significant impact to wildlife corridors or nursery sites from the Project.
- e) **Less than Significant with Mitigation.** Sonoma County Tree Protection Ordinance (Section 26-88-010(m)) (1986) defines heritage tree as trees greater than 9 inches of the following species: big leaf maple (*Acer macrophyllum*), black oak (*Quercus kelloggii*), blue oak (*Quercus douglasii*), coast live oak (*Quercus agrifolia*), interior live oak (*Quercus wislizenii*), madrone (*Arbutus menziesii*), oracle oak (*Quercus morehus*), Oregon oak (*Quercus garryana*), redwood (*Sequoia sempervirens*), valley oak, California bay (*Umbellularia californica*) and hybrids. Valley oaks are to be retained to the fullest extent possible. Under the Ordinance, removal of such trees is allowed only if the tree is dead or likely to spread insects or diseases, poses a public safety or property hazard, or creates an unreasonable economic impact on the property. Excessive or improper pruning of trees is also restricted.

The Project has not yet identified which trees would be removed during each phase of the Project. If any trees slated for removal would fall under protection of the Ordinance, their removal would be a significant impact. Implementation of Mitigation Measure BIO-10 would reduce the impact of the Project relative to heritage tree removal to a less-than-significant level.

Mitigation Measures

Mitigation Measure BIO-10: Secure Permits for Tree Removal.

Mitigation Measure BIO-10 applies to any tree removal that could occur as a result of construction during all phases.

Prior to start of construction, Regional Parks shall determine whether any heritage or valley oak trees would require removal. If any such tree would require removal, Regional Parks shall adhere to the requirements of the Sonoma County Tree Protection Ordinance (Section 26-88-010(m)) (http://sonomacounty-ca.elaws.us/code/coord_ch26_art88_sec26-88-010), including by implementing replacement plantings in accordance with the standards set forth therein. Protocols for the installation, monitoring, and successful establishment of replacement plantings shall be specified in Habitat Restoration and Monitoring Plan described in Mitigation Measure BIO-7. Where it is infeasible to replant in place, Regional Parks may replant off-site or make in-lieu payment fees in accordance with the terms of the ordinance.

- f) **No Impact.** No Habitat Conservation Plans or Natural Community Conservation Plans cover the area of the Master Plan. Thus, the Project would not conflict with the

provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan, and there would be no impact to habitat conservation plans from implementation of the Project.

Cumulative Impacts

Cumulative impacts analysis considers the effects of Project implementation in combination with those of proximate past, present, and reasonably foreseeable future projects, and whether the Project's contribution to the cumulative impact would be significant. The cumulative projects listed in Table 2-1 include current and ongoing, recent, and foreseeable future projects in the vicinity of the Project area. Some projects would abut Maxwell Farms Regional Park, but none would impact the conservation area of Maxwell Farms Park, or the special-status species, nesting birds, bats, or sensitive natural communities therein. The Sonoma Trunk Sewer Replacement MH90-3 to MH 136-5, Phase 2, would construct an underground pipeline within Maxwell Farms Regional Park, but outside of the naturalized portions of the park (Figure 3). Project construction would occur in relatively non-sensitive portions of the park with similar nesting bird, bat, and special-status species protection measures to those under the proposed Project. Such measures would avoid and reduce potential direct and indirect impacts to regulated biological resources such that cumulative impacts are not anticipated.

These species and communities exist in a fragmented, isolated condition within the park, which is ringed by residential, retail and agricultural development. While this circumstance would not be altered by the implementation of the Maxwell Farms Regional Park Master Plan Update, it represents a stressor on the species and natural communities within the park. From this baseline condition of isolation and stress, implementation of work within the non-urbanized portion of the park would impose additional stresses associated with temporary increases traffic, noise, vegetation removal, and other human disturbances within habitat areas. These disturbances would be limited to localized areas and implemented at a moderate pace according to seasonal restrictions and park resources, to minimize impacts on park users as well as biological resources. In addition, these impacts would be minimized by implementation of Biological Mitigation Measures 1-10 above. With implementation of these measures and the moderate pace of installation of the proposed Project elements in the conservation area, the Project would not have a cumulatively considerable contribution to impacts on special-status species, natural communities, or other biological resources. Thus, the cumulative effect would be **less than significant**.

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Cultural and Paleontological Resources

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
5. CULTURAL AND PALEONTOLOGICAL RESOURCES — Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Discussion

- a) **No Impact.** CEQA Guidelines Section 15064.5 requires the lead agency to consider the effects of a project on historical resources. A historical resource is defined as any building, structure, site, or object listed in or determined to be eligible for listing in the California Register of Historical Resources (California Register), or determined by a lead agency to be significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, or cultural annals of California. The following discussion focuses on architectural and structural resources. Archaeological resources, including those that are potentially historical resources according to CEQA Guidelines Section 15064.5, are addressed in response to question 2.5b.

Background research and a field survey on April 9, 2018 confirmed there are no architectural resources older than 45 years and potentially eligible for listing in the California Register in the Project site. Accordingly, there are no architectural or structural resources in the Project site that qualify as historical resources, as defined in CEQA Guidelines Section 15064.5 and the Project would not impact any historical resources.

- b) **Less than Significant with Mitigation.** This section discusses archaeological resources, both as historical resources according to Section 15064.5 of the CEQA Guidelines as well as unique archaeological resources as defined in Section 21083.2(g) of the CEQA Guidelines. A significant impact would occur if the Project would cause a substantial adverse change to an archaeological resource through physical demolition, destruction, relocation, or alteration of the resource.

ESA conducted a records search of the Project site at the Northwest Information Center (NWIC) of the California Historical Resources Information System at Sonoma State University on March 26, 2018 (File No. 17-2341). Records indicate that two cultural resources investigations have been completed that included all or portions of Maxwell Farms Regional Park. In 1977, archaeologists from Sonoma State University documented

cultural resources in the 93-acre parcel prior to establishment of the Maxwell Farms Regional Park (Stillinger and Fredrickson, 1977). They identified two resources, a prehistoric archaeological site (designated CA-SON-1069, discussed further below) and a historic-period resource (CA-SON-1068H). The historic-period resource consisted of historic buildings and structures related to the Maxwell family, outside of the current Project boundaries, which were demolished for construction of the existing Maxwell Village Shopping Center.

The other study consisted of a cultural resource survey for a sewer trunk replacement project for the Sonoma County Water Agency (Barrow, 2017). The study included excavating a series of subsurface auger holes to determine whether buried or obscured archaeological resources were in that project footprint. No cultural resources were identified during that survey.

Five (5) prehistoric archaeological sites have been previously recorded within a 0.5-mile radius of the Project site; including sites CA-SON-131 and CA-SON-1069, both of which are recorded within the Project site. Site CA-SON-131 is one of a series of prehistoric sites recorded by Jesse Peters in the early 20th century while he was a student at University of California Berkeley. He identified approximately 150 sites in Sonoma County and mapped the sites locations on the relevant 15-minute United States Geographic Survey topographic quadrangle maps. He did not fill out any records or provide other information on the sites; therefore, no additional information is available about CA-SON-131. The survey effort in 1977, prior to development of the existing park, did not relocate site CA-SON-131, and its whereabouts remain unknown (Stillinger and Fredrickson, 1977).

Archaeological site CA-SON-1069, which consists of dark midden soil, artifacts, shell, and obsidian flakes, is also recorded within the Project site. When the site was recorded in 1977, the archaeologists recommended that it was eligible for listing in the National Register of Historic Places as important for understanding the prehistory of the area. They also recommended that the site be avoided during planning for the proposed park use (Stillinger and Fredrickson, 1977).

For the proposed Project, ESA archaeologists conducted a surface survey of the Project site on April 9, 2018 and re-located archaeological site CA-SON-1069. Based on the known site constituents, archaeological site CA-SON-1069 is recommended eligible for listing in the California Register under criterion A (for its association with the lifeways of Native Americans in the Sonoma County area) and criterion D (for the ability to yield information important to prehistory). Because the archaeological site is eligible for listing in the California Register, it is considered a historical resource and a unique archaeological resource for the purposes of CEQA.

Subsequent to ESA's surface survey Tom Origer and Associates prepared an updated Department of Parks and Recreation 523 form for CA-SON-1069.

Given the proximity of proposed Project components to archaeological site CA-SON-1069, Project construction activities (e.g., grading for trail improvements to existing trail alignments, invasive non-native vegetation removal, installation of fencing and wayfinding signage) and operations (e.g., visitor traffic, trail maintenance), could inadvertently disturb resources associated with the site. Impacts to a historical resource (including prehistoric archaeological resources) and/or a unique archaeological resource would be significant. In regard to impacts to archaeological sites that are considered historical resources or unique archaeological resources, PRC Section 21083.2 and Section 15126.4 of the CEQA Guidelines emphasize a preference for preservation in place. Consistent with Section 15126.4(b)(3), preservation in place may be accomplished through planning construction to avoid the resource; incorporating the resource within open space; covering and otherwise stabilizing the resource; or deeding the site into a permanent conservation easement. **Mitigation Measure CUL-1a** would reduce impacts to archaeological site CA-SON-1069 to a less-than-significant level by requiring an Archaeological Resources Management Plan be developed to establish management guidelines for protecting the resource from long-term impacts. The management plan shall include provisions to minimize impacts such as installing physical barriers (i.e., split rail fencing and/or log barriers) between the site and adjacent trails, decommissioning specific informal trail segments that currently traverse the more sensitive areas of the site, and where necessary, raising segments of trails to cover areas of archaeological site CA-SON-1069 with select fill and firm and stable aggregate trail surfacing. Additionally, steep and eroding slopes within the archaeological site boundary would be stabilized using a combination of bio engineering techniques and vegetation to limit additional erosion and increase long term stability. Slope stabilization, and the decommissioning of informal trails within in the archaeological site boundary would be coordinated with the riparian restoration work where applicable.

While no additional archaeological resources have been identified in the remaining areas of the Project site, there is the potential that unrecorded archaeological resources could be identified during ground disturbing activities. Impacts to previously unidentified archaeological resources would be significant. This impact would be reduced to a less-than-significant level with implementation of **Mitigation Measure CUL-1b**, which would require preconstruction archaeological resources training for construction workers and that work halt in the vicinity of a find until a qualified archaeologist can make an assessment and provide further recommendations for avoidance or testing.

Mitigation Measures

Mitigation Measure CUL-1a: Archaeological Resources Management Plan.

Prior to any ground disturbing activities in the vicinity of archaeological site CA-SON-1069, Sonoma County Regional Parks will retain the services of a qualified archaeologist with expertise in California archaeology to develop an Archaeological Resources Management Plan (ARMP). The ARMP will be completed in consultation with and subject to approval by the Federated Indians of Graton Rancheria. The ARMP will include detailed guidelines for decommissioning existing trail segments, through the use of physical barriers (i.e., split rail fencing, and/or log barriers) and re-

vegetation, raising other segments of the trail to cover or otherwise stabilize areas of the archaeological site where necessary, and establishing management guidelines for protecting the archaeological site from long-term impacts. The ARMP will include, but not be limited to, the following components:

- Mapping of the site boundaries in relation to a reference system to confirm the extent so that the site can be relocated in the future and trails can be decommissioned, re-located, fenced, covered or otherwise stabilized.
- Where covering or capping is deemed necessary, provisions for geotextile fabric to be placed on top of the site, followed by the capping fill material to distinguish between the two materials. Fill material shall be placed to a 1.5-foot minimum depth of cover.
- A qualified archaeologist will work with project engineers to design the cap to minimize erosion.
- All covering and stabilization work to preserve the site shall be monitored by a qualified archaeologist and a culturally-affiliated Native American representative.
- No ground disturbance within 250 feet of the site will be implemented until treatment measures are designed and agreed upon.
- Provisions to stabilize segments of the two main trails (Verano Trail, and Three Meadows Trail) for limited vehicle traffic (i.e. for emergency and maintenance).
- After the trail modification and mitigation activities are complete, the site will be inspected by a qualified archaeologist and a culturally-affiliated Native American representative to assess the condition of the site and record any potential problems on a periodic basis as agreed upon by the Federated Indians of Graton Rancheria and the Regional Parks. Any damage will be documented and a course of treatment will be determined by the archaeologist in consultation with the a culturally-affiliated Native American representative and Sonoma County Regional Parks.

Mitigation Measure CUL-1b: Preconstruction Training and Inadvertent Discovery of Archaeological Resources.

Prior to any ground disturbing activities, a qualified archaeologist with expertise in California archaeology, in consultation with the Federated Indians of Graton Rancheria, will develop an archaeological resources training program for all construction and field workers involved in ground-disturbing activities that details the recognition and importance of archaeological resources, and establishes accidental discovery procedures should archaeological resources be encountered during construction.

If an archaeological resource is encountered, all activity within 100 feet of the find should immediately halt until it can be evaluated by a qualified archaeologist (and a Native American representative if the artifacts are prehistoric). Prehistoric archaeological materials include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil (“midden”) containing heat-affected rocks, artifacts, or shellfish remains; and stone milling

equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered stone tools, such as hammerstones and pitted stones. If the archaeologist (and Native American representative) determines that the resources may be significant, they shall notify Sonoma County Regional Parks. If the resource cannot be avoided, an appropriate treatment plan for the resources shall be developed. The archaeologist shall consult with Native American representatives in determining appropriate treatment for prehistoric or Native American cultural resources.

In considering any suggested mitigation proposed by the archaeologist and Native American representative, Sonoma County Regional Parks shall determine whether avoidance is feasible in light of factors such as the nature of the find, project design, costs, and other considerations. If avoidance is not feasible, other appropriate measures (e.g., data recovery as agreed upon between Sonoma County Regional Parks, the archaeological consultant, and Native American representatives) shall be instituted. Work may proceed in other parts of the Project site while mitigation for archaeological resources is being carried out.

- c) **Less than Significant with Mitigation.** Paleontological resources are the fossilized evidence of past life found in the geologic record. Despite the tremendous volume of sedimentary rock deposits preserved worldwide, and the enormous number of organisms that have lived through time, preservation of plant or animal remains as fossils is an extremely rare occurrence. Because of the infrequency of fossil preservation, fossils—particularly vertebrate fossils—are considered to be nonrenewable resources. Because of their rarity, and the scientific information they can provide, fossils are highly significant records of ancient life.

Rock formations that are considered of paleontological sensitivity are those rock units that have yielded significant vertebrate or invertebrate fossil remains (SVP, 2010). This includes, but is not limited to, sedimentary units that contain significant paleontological resources anywhere within its geographic extent.

The Project site is underlain by Late Holocene Alluvium and Early Pleistocene Alluvium. Holocene Alluvium sediments date from the present to approximately 11,700 years ago. Due to the age of these deposits, they have low paleontological sensitivity at the surface; however, these sediments increase in age with depth, and therefore fossil resources could be encountered in the deeper levels of this unit.

Early Pleistocene Alluvium sediments date from between approximately 11,700–2.58 million years ago. Pleistocene alluvial sediments have a rich fossil history. The most common Pleistocene terrestrial mammal fossils include the bones of mammoth, bison, deer, and small mammals, but other taxa, including horse, lion, cheetah, wolf, camel, antelope, peccary, mastodon, capybara, and giant ground sloth, as well as reptiles such as frogs, salamanders, and snakes (Graham and Lundelius, 1994; Hudson and Brattstrom, 1977). The University of California Museum of Paleontology database lists 12 vertebrate fossil specimens in Pleistocene-aged sediments in Sonoma County (UCMP, 2018). Due to the established presence of fossil resources in this unit in Sonoma County and

elsewhere across the Bay Area, Early Pleistocene Alluvium has a high paleontological potential according to the Society of Vertebrate Paleontology guidelines.

Despite the general paleontological sensitivity of the Early Pleistocene Alluvium sediments underlying portions of the Project site, there would be limited ground disturbance into previously undisturbed formations that could potentially impact paleontological resources, which lessens the potential for paleontological discovery. However, in the event that paleontological resources are encountered during ground disturbing activities, the impact would be significant. This impact would be reduced to a less-than-significant level by implementation of **Mitigation Measure CUL-2**, which requires preconstruction training and that work halt in the vicinity of a find until a qualified paleontologist can make an assessment and provided further recommendations.

Mitigation Measures

Mitigation Measure CUL-2: Preconstruction Training and Inadvertent Discovery of Paleontological Resources.

Prior to any ground disturbing activities, a qualified paleontologist meeting the standards of the Society of Vertebrate Paleontology with expertise in California paleontology shall develop a paleontological resources training program for all construction and field workers involved in ground-disturbing activities that details the recognition and importance of paleontological resources, and establishes accidental discovery procedures should paleontological resources be encountered during construction.

If paleontological resources, such as fossilized bone, teeth, shell, tracks, trails, casts, molds, or impressions are discovered during ground-disturbing activities, work shall stop in that area and within 100 feet of the find until a qualified paleontologist can assess the nature and importance of the find and, if necessary, develop appropriate salvage measures in conformance with Society of Vertebrate Paleontology standards (2010), and in consultation with Sonoma County Regional Parks.

- d) **Less than Significant with Mitigation.** Based on the records search and background research no previously recorded human remains exist in the Project site. However, a prehistoric archaeological site exists within the Project site that may contain human remains. As noted in response to question 2.5b, Project construction and operations would involve ground disturbing activities that could encounter resources associated with the site, including human remains. Impacts to human remains would be a significant impact.

Implementation of **Mitigation Measure CUL-1a**, as described above, would reduce potential impacts to human remains by ensuring the known archaeological site is preserved in place in accordance with the provisions of CEQA Guidelines Section 15126.4(b)(3) and that management guidelines are established for protecting resources from long-term impacts.

For the remaining Project site, there is a lower potential to uncover human remains. Nevertheless, in the event human remains are encountered during ground disturbing activity the impact could be significant. The potential for such impacts would be reduced to a less-than-significant level by implementing **Mitigation Measure CUL-3, Inadvertent Discovery of Human Remains**, which sets forth protocols and procedures for responding in the event that human remains are identified during ground disturbing activities, including halting construction, contacting the County Coroner to assess the find, among other appropriate actions (including contacting the Most Likely Descendant).

Mitigation Measures

Mitigation Measure CUL-3. Inadvertent Discovery of Human Remains.

In the event of discovery or recognition of any human remains during ground disturbing activities, such activities should cease within 100 feet of the find until the Sonoma County Coroner has been contacted to determine that no investigation of the cause of death is required, in compliance with applicable State laws, including Section 7050.5 of the Health and Safety Code. If it is determined that the remains are Native American in origin, the Native American Heritage Commission (NAHC) will be contacted within 24 hours. The NAHC will then identify the person or persons it believes to be the most likely descendant (MLD) from the deceased Native American. The MLD would, in turn, make recommendations to Sonoma County Regional Parks for the appropriate means of treating the human remains and any grave goods.

Cumulative Impacts

With design strategies and mitigation, the Project would not contribute to significant cultural resource impacts. The geographic scope of analysis for cumulative impacts on historical resources, archaeological resources, paleontological resources, and human remains encompasses areas where development would occur in the vicinity of the Project site. This area was selected because of the similar themes of its Native American use, as well as prehistoric and historic-period use and associated cultural resources.

The cumulative analysis combines cultural resources and paleontological resources into a single, non-renewable resource base and considers the additive effect of potential Project impacts on: architectural resources and archaeological resources that qualify as historical resources, paleontological resources, and human remains. A cumulatively significant impact would result if incremental effects of the Project, after implementation of mitigation, combined with the impacts of one or more cumulative projects, after implementation of their mitigation, were to cause a substantial adverse effect on the same cultural or paleontological resource.

There are no known historic architectural resources that qualify as historical resources in the Project site; therefore, the Project would not contribute to a significant cumulative effect on architectural historical resources.

There is one archaeological resource in the Project site that is considered a historical resource. As discussed above, the Project would avoid this resource through preservation in place in

accordance with the provisions of CEQA Guidelines Section 15126.4(b)(3) including decommissioning select existing trails, and re-aligning and/or raising other existing trails, installation of physical barriers, and covering with fill placement where necessary. The Project would have the potential to affect unknown archaeological resources, paleontological resources, and human remains. However, there would not be the potential for the Project and cumulative projects to affect the same undiscovered cultural or paleontological resources.

Federal, state, and local laws can generally protect cultural and paleontological resources in most instances. Development in the geographic scope would be required to comply with the same provisions of CEQA and implement measures similar to those identified above (i.e., Mitigation Measure CUL-1b, Mitigation Measure CUL-2, and Mitigation Measure CUL-3). These measures would require preconstruction training and protocols for responding in the event of inadvertent discovery of archaeological resources, paleontological resources, or human remains.

Through compliance with applicable regulations and implementation of associated avoidance and minimization measures, the Project would not have a considerable contribution to adverse effects on cultural resources of the region. This cumulative impact would be less than significant.

References

- Barrow, E. 1994. *Historical Resources Study for the Sonoma Valley County Sanitation District Sewer Trunk Replacement Project - Reaches B and C Sonoma County, California*. Prepared for Sonoma County Water Agency. July 2017. Graham, R.W., and E.L. Lundelius, FAUNMAP: A database documenting the late Quaternary distributions of mammal species in the United States. *Illinois State Museum Scientific Papers* XXV (1).
- Hudson, D. and B. Brattstrom. 1977 A small herpetofauna from the Late Pleistocene of Newport Beach Mesa, Orange County, California. *Bulletin of the Southern California Academy of Sciences* 76: 16–20.
- Stillinger, R. and D.A. Fredrickson. 1977. *An Archaeological Reconnaissance of the Maxwell Estate, Sonoma County, California*. On file (S-695), NWIC.
- University of California Museum of Paleontology (UCMP), Collections Database Search Results. <http://www.ucmp.berkeley.edu/science/collections.php>. Accessed April 2018.

Geology, Soils, and Seismicity

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
6. GEOLOGY and Soils — Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

The Project site is located within the geologically complex region of California referred to as the Coast Range Geomorphic Province. Much of the Coast Range province is composed of marine sedimentary deposits and volcanic rocks that form northwest trending mountain ridges and valleys, running subparallel to the San Andreas Fault Zone. Bedrock geology in this region consists primarily of greywacke, shale, greenstone (altered volcanic rocks), basalt, chert (ancient silica-rich ocean deposits), and sandstone that originated as ancient sea floor sediments. The area is considered to be very seismically active with numerous active faults located throughout region which are capable of producing significant earthquakes. The closest active fault to the Project site is the Rodgers Creek fault which is approximately 5 miles west of the site. Any improvement for which a building permit is required must adhere to the most recent version of the California Building Code which has seismic design criteria.

- a.i) **Less than Significant.** The Project site is not located within an Alquist-Priolo Earthquake Fault Zone and therefore is not likely to experience fault rupture. The nearest

- active fault, Rodgers Creek fault, is approximately 5 miles west of the Project site. The potential impact related to fault rupture would be less than significant.
- a.ii) **Less than Significant.** The Project site is located in a seismically active region of California that contains many active and potentially active faults and is considered an area of high seismic activity.³ The U.S. Geological Survey (USGS) along with the California Geological Survey and the Southern California Earthquake Center formed the Working Group on California Earthquake Probabilities which has evaluated the probability of one or more earthquakes of magnitude 6.7 or higher occurring in the state of California over the next 30 years. The result of the evaluation indicated a 72 percent likelihood that such an earthquake event will occur in the Bay Area (USGS, 2015). The known major faults in the general vicinity of the Project site include Rodgers Creek, San Andreas, West Napa, and Green Valley faults. The Project site could experience a range of ground shaking effects during an earthquake on any one these faults. The intensity of an earthquake would depend on the distance to the source of the earthquake, the depth of the epicenter, the duration of shaking, and the underlying materials of the site. The proposed improvements could be subject to substantive groundshaking. However, the proposed improvements do not consist of any habitable structures (i.e., structures occupied by at least one person with at least 2,000 hours/year) and therefore would represent a relatively low risk for causing adverse effects to visitors or employees. In addition, all proposed improvements would be subject to California Building Code requirements, as applicable, which would reduce potential impacts to less than significant levels.
- a.iii) **Less than Significant.** Liquefaction is a phenomenon in which saturated cohesion-less soils are subject to a temporary loss of shear strength because of pore pressure build up under the cyclic shear stresses associated with earthquakes. According to mapping compiled by the U.S. Geological Survey, the Project site is located in an area considered to have a moderate potential for liquefaction. The actual potential for liquefaction can only be determined through collection and analysis of site specific data. However, as noted above, the Project does not include any habitable structures, and would be required to adhere to California Building Code requirements, as applicable. The adherence to building code requirements would ensure that all improvements address any liquefaction hazards that might be present at the site. Therefore, with adherence to the California Building Code, the potential impacts related to liquefaction would be less than significant.
- a.iv) **Less than Significant.** The Project site is located within the Sonoma Creek Valley floor where the topographical change is relatively small. The site has a gentle slope from the northeast to the southwest, towards Sonoma Creek which represents the lowest elevations

³ An “active” fault is defined by the State of California as a fault that has had surface displacement within Holocene time (approximately the last 11,000 years). A “potentially active” fault is defined as a fault that has shown evidence of surface displacement during the Quaternary (last 1.6 million years), unless direct geologic evidence demonstrates inactivity for all of the Holocene or longer. This definition does not, of course, mean that faults lacking evidence of surface displacement are necessarily inactive. “Sufficiently active” is also used to describe a fault if there is some evidence that Holocene displacement occurred on one or more of its segments or branches.

- of the site. Therefore, the Project site does not include any substantive slopes with the possible exception of some creek bank slopes. The area surrounding the Project site is also relatively flat. Therefore, the potential for earthquake-induced landslides to adversely affect visitors, employees, or any of the proposed improvements would be less than significant.
- b) **Less than Significant.** Construction activities would include earthwork activities, which could expose soils to the effects of erosion and loss of topsoil. Because the Project site and proposed amount of disturbance is greater than one acre, it would require coverage under the National Pollution Discharge Elimination System (NPDES) General Construction Activities Stormwater Permit (General Permit). Once constructed, surface soils at the site would be covered by the proposed improvements or landscaping that would prevent any long term erosional effects from occurring. In particular, the riparian zone of Sonoma Creek would see removal of non-native vegetation, informal trail eradication, and revegetating with native seeds and plants. The two access points to the creek would be improved and stabilized with wood timber steps to prevent erosion and provide safe access to the creek. Therefore, through compliance with this regulatory requirement and the proposed improvements within the riparian corridor, the potential impact would be less than significant.
- c) **Less than Significant.** If not designed appropriately, construction on relatively loose materials or over materials of differing properties could be subject to subsidence or differential settlement. However, the Project would be required to adhere to site preparation standards in accordance with grading permits, building code requirements, which include site specific design-level evaluation of underlying materials and their engineering characteristics. The Project would be required to include site preparation such as removal of unsuitable materials and either recompacted or replaced with engineered fill. Therefore, with implementation of industry standard engineering design measures in accordance with current building code standards, the potential impacts associated with unstable soils would be less than significant. Potential impacts related to liquefaction are discussed above.
- d) **Less than Significant.** If not addressed during site preparation prior to construction, expansive soils, if present, could subject proposed improvements to damage as a result of long term changes in volume of underlying materials. In general, expansive soils can either be removed or replaced with engineered fill or treated onsite to remove the potential for expansion. The determination of whether potentially expansive soils are present at the site would require site specific analysis which would be conducted as part of a final geotechnical report in accordance with building code requirements. Therefore, with implementation of industry standard techniques, in accordance with current building code requirements and as provided in the required geotechnical investigation, the proposed Project would have a less-than-significant impact related to expansive soils.
- e) **No Impact.** The Project includes construction of two concession/restroom buildings which would tie into existing wastewater sewer lines and does not require the use of

septic tanks or any other alternative wastewater disposal system. Therefore, the Project would have no impact related to the support of septic systems.

Cumulative Impacts

The geographic context for the cumulative analysis for Geology and Soils is the greater Bay Area region which represents a general area of seismic influence. However, in general, seismic hazards are dependent on site specific factors that can change considerably over relatively short distances. As a result, hazards tend to be localized and other past, present, or reasonably foreseeable projects do not typically combine to become cumulatively considerable. Cumulative projects would be subject to a range of similar seismic hazards with varying degrees of severity dependent on a number of different factors including the characteristics of subsurface materials, distance to active faults, topography, and others.

Development of the Project with implementation of the regulatory requirements discussed above, would result in less-than-significant impacts related to exposing persons or structures to geologic, soils, or seismic hazards. Similar to the Project, other projects in the area would be required to adhere to the same California Building Codes that would reduce the risk to people and property to less-than-significant levels. While future seismic events cannot be predicted, adherence to all federal, State, and local programs, requirements and policies pertaining to building safety and construction would limit the potential for injury or damage to a less-than-significant level. Individual projects are also required to comply with applicable codes, standards, and permitting requirements (e.g., preparation of a SWPPP) to mitigate erosion impacts. Therefore, the Project combined with past, present, and other reasonably foreseeable development in the area, would not result in a cumulatively significant impact by exposing people or structures to risk related to geologic hazards, soils, and/or seismic conditions as well as erosion hazards. Therefore, the Project would result in less-than-significant cumulative impacts related to geology and soils.

References

United States Geological Survey (USGS). 2015. Working Group on California Earthquake Probabilities, Fact Sheet 2015-3009, *UCERF3: A New Earthquake Forecast for California's Complex Fault System*, March 2015.

Greenhouse Gas Emissions

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
7. GREENHOUSE GAS EMISSIONS — Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

- a) **Less than Significant.** Based on the following analysis, construction and operation of the Project would not generate greenhouse gas (GHG) emissions that would have a significant impact on the environment.

Construction activities that would be associated with the Project would include site preparation; grading and construction of a reconfigured and expanded parking lot, baseball complex, soccer complex, tennis and pickle ball courts, and related facilities. Construction activities would occur over a period of approximately 34 months.

The majority of the construction-related GHG emissions would be generated on-site due to the use of heavy-duty off-road equipment and a smaller amount of emissions would be generated off-site from trucks transporting equipment and material to the site. Once Project construction is complete, GHG emissions generated during Project operation would consist of vehicle trips resulting from an increase in park visitors accommodated by the Project improvements.

The Bay Area Air Quality Management District (BAAQMD) has adopted an operational GHG significance threshold of 1,100 metric tons of CO_{2e} per year for projects other than stationary sources and a threshold of 10,000 metric tons of CO_{2e} per year for stationary source projects (BAAQMD, 2017a). Since the Project would not include stationary sources of GHG emissions, the Project's combined annual construction and operational emissions are compared to the BAAQMD's GHG significance threshold of 1,100 metric tons of CO_{2e} per year to determine whether the Project would result in a significant impact on the environment.

GHG emissions from construction activities were estimated using the California Emissions Estimator Model (CalEEMod) version 2016.3.2 with the same the assumptions as discussed in Section 2.3, Air Quality. The results of the CalEEMod model indicate that the Project would generate a total of approximately 1,132 metric tons of CO_{2e} over the 3-year Project construction period. Amortized over an estimated Project life of 30 years, the annual GHG emissions from Project construction would be 37.7 metric tons of CO_{2e}.

Operational emissions from vehicular traffic as a result of people visiting the park would result in annual GHG emissions of 228 metric tons of CO_{2e}.

The sum of Project construction and operational GHG emissions would be approximately 265.7 metric tons per year, which would be well below the BAAQMD's 1,100 metric tons per year significance threshold. Therefore, the Project would not generate GHG emissions that may have a significant impact on the environment. This impact would be less than significant.

- b) **Less than Significant.** Construction of the Project would require the use of fuels (primarily gasoline and diesel) for operation of off-road construction equipment (e.g., dozers, excavators, generators, and trenchers), construction vehicles (e.g., dump and delivery trucks), and construction worker vehicles. Direct energy use would also include the use of electricity required to power construction equipment (e.g., welding machines and electric power tools). Construction activities would be temporary, spanning approximately 34 months, and would not result in a long-term increase in demand for energy, and would not be of sufficient magnitude to require new infrastructure to be constructed to supply construction activities. Project operations would involve expanded nighttime lighting, which would increase operational electricity demands.

The County of Sonoma has adopted the Sonoma County Regional Climate Action Plan, which provides an overall strategy for reducing GHG emissions in each sector to meet a target of reducing emissions to 25 percent of 1990 levels by 2020 (Sonoma County, 2016). Of the strategies identified in the Sonoma County Regional Climate Action Plan, one is relevant to the Project: Measure 2-L2 (Solar in New Non-Residential Developments). Since the Project would include canopy-mounted photovoltaic (PV) solar arrays at onsite parking areas and the planting of new trees throughout the redeveloped park, the Project would implement Measure 2-L2 of the County's Climate Action Plan, and would not hinder the meeting of its target reductions. Therefore, the Project would not conflict with the County's Regional Climate Action Plan.

Relatedly, the Project's anticipated energy consumption would be necessary to achieve the Project's construction and operational objectives. The fleet of construction equipment and tools required to complete project construction would be small. Similarly, the expanded lighting would be limited to evening hours, primarily during the non-summer months when supplemental lighting is required for recreational activities after sunset. Considering the small construction fleet, the limited construction duration, and the anticipated energy demand offsets that would result from installation of the PV solar arrays, the Project would not result in the wasteful or unnecessary use of energy.

In addition to the Sonoma County Regional Climate Action Plan, the Project would also be consistent with the BAAQMD 2017 Clean Air Plan (2017 CAP) (BAAQMD, 2017b) and AB32. The 2017 CAP contains 35 control measures aimed at reducing GHG emissions in the Bay Area. The 2017 CAP does not contain any measures specific to recreational fields and ancillary facilities, no inconsistency with the 2017 CAP is

identified. With no specific control measures from the 2017 CAP applicable to parks, the Project would not hinder implementation of CAP control measures. However, since the Project would not result in a substantial increase in GHG emissions, the Project would not conflict with the implementation of the GHG reduction measures found in 2017 CAP. The BAAQMD GHG thresholds were designed to meet the AB32 goal of reducing GHG emissions to 1990 levels by 2020. As discussed for checklist question 2.8a, the Project would not result in any temporary or new permanent sources of GHG emissions that would exceed the BAAQMD's 1,100 metric tons per year CO₂e significance threshold. Since the BAAQMD GHG significance threshold would not be exceeded, the Project would not result in a cumulatively considerable increase in GHG emissions that would impair the State's ability to implement AB 32. This impact would be less than significant.

Cumulative Impacts

Both the BAAQMD and the California Air Pollution Control Officers Association (CAPCOA) consider GHG impacts to be exclusively cumulative impacts (BAAQMD, 2017a; CAPCOA, 2008); therefore, assessment of significance is based on a determination of whether the GHG emissions from a project represent a cumulatively considerable contribution to the global atmosphere. CEQA Guidelines Section 15064(h)(3) states that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program (including plans or regulations for the reduction of greenhouse gas emissions) that provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area in which the project is located. As noted for questions 2.8a, the Project would generate emissions well below the BAAQMD threshold, which considers the incremental project contributions to cumulative GHG impacts. And as explained for question 2.8b, the Project would comply with the County's CAP, through the installation of PV solar arrays and tree planting. For these reasons, the Project would not have a significant contribution to cumulative GHG emissions. The impact would be less than significant.

References

- California Air Pollution Control Officers Association (CAPCOA). 2008. *CEQA & Climate Change, Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act*, January 2008.
- Bay area Air Quality Management District (BAAQMD), 2017a. California Environmental Quality Act – Air Quality Guidelines. May 2017.
- BAAQMD, 2017b. Spare the Air Cool the Climate. April 19, 2017.
- Sonoma County, 2016. Sonoma County Regional Climate Action Plan 2020. July 2016.

Hazards and Hazardous Materials

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
8. HAZARDS AND HAZARDOUS MATERIALS — Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

Materials and waste are generally considered hazardous if they are poisonous (toxicity), can be ignited by open flame (ignitability); corrode other materials (corrosivity), or react violently, or explode or generate vapors when mixed with water (reactivity). The term “hazardous material” is defined in the State Health and Safety Code (Chapter 6.95, Section 25501[o]) as any material that, because of quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment.

The sensitivity of potential receptors in the areas of known or potential hazardous materials is dependent on several factors, the primary factor being the potential pathway for human exposure. Exposure pathways include external exposure, inhalation, and ingestion of contaminated soil, air, water, or food. The magnitude, frequency, and duration of human exposure can cause a variety of health effects, from short term acute symptoms to long-term chronic effects.

Hazardous materials and wastes are regulated by numerous federal, state, and local agencies that begin with the U.S. Environmental Protection Agency (EPA). The major federal laws and regulations enforced by the U.S. EPA include the: Resource Conservation and Recovery Act (RCRA); Toxic Substances Control Act (TSCA); Comprehensive Environmental Response, Compensation and Liability Act (CERCLA); and Superfund Amendments and Reauthorization Act (SARA). Transportation of hazardous materials is overseen by the California Department of Transportation (Caltrans) which is the implementing agency for U.S. Department of Transportation laws and regulations. Worker health and safety is covered under the jurisdiction of the California Occupational Health and Safety Administration (OSHA). State policies regarding wildland fire safety are administered by the Office of the State Fire Marshal and the California Department of Forestry and Fire Protection (CalFIRE).

Many of the state and federal regulations are enforced at a local level under the Certified Unified Program Agency (CUPA), which for Sonoma County is the Hazardous Materials (HazMat) Unit.

- a) **Less than Significant with Mitigation.** Construction activities would require the use of limited quantities of hazardous materials such as fuels, oils, solvents, and glues. Inadvertent release of large quantities of these materials into the environment could adversely impact workers, the public, soil, surface waters, or groundwater quality. The use of construction best management practices implemented as part of a Storm Water Pollution Prevention Plan (SWPPP) (discussed further in Section 2.9, Hydrology, below) as required by the National Pollution Discharge Elimination System General Construction Permit would minimize the potential adverse effects to workers, the public, groundwater and soils. These could include the following:
- Establish a dedicated area for fuel storage and refueling activities that includes secondary containment protection measures and spill control supplies;
 - Follow manufacturer's recommendations on use, storage and disposal of chemical products used in construction;
 - Avoid overtopping construction equipment fuel gas tanks;
 - During routine maintenance of construction equipment, properly contain and remove grease and oils.
 - Properly dispose of discarded containers of fuels and other chemicals.

In general, aside from refueling needs for heavy equipment, the hazardous materials typically used on a construction site are brought onto the site packaged in consumer quantities and used in accordance with manufacturer recommendations. The overall quantities of these materials on the site at any one time would not result in large bulk amounts that, if spilled, could cause a significant soil or groundwater contamination issue. Spills of hazardous materials on construction sites are typically localized and would be cleaned up in a timely manner. As described above, refueling activities of heavy equipment would be conducted in a controlled dedicated area complete with secondary containment and protective barriers to minimize any potential hazards that might occur with an inadvertent release. Given the required protective measures (i.e., best

management practices, or BMPs) and the quantities of hazardous materials typically needed for construction projects such as the proposed Project, the threat of exposure to the public or contamination to soil and/or groundwater from construction-related hazardous materials is considered a less than significant impact.

Once constructed, the use of hazardous materials at the site would be limited as it relates to periodic maintenance, landscaping, and site upkeep. These activities could include the use of fuels, oils, paints, herbicides, and pesticides. However, these products would be used in relatively small quantities and in accordance with manufacturer's recommendations as well as Sonoma County Regional Park policies and practices for safe storage, handling and disposal of hazardous materials.

Outside of the hazardous materials used for maintenance and upkeep, the project includes the construction of a synthetic turf field which could include the use of crumb rubber infill made from recycled tire pieces. Recycled tire products are known to include hazardous chemicals such as volatile organic compounds (VOCs), semi-volatile compounds (SVOCs) (including benzothiazoles, aniline, and phenols), and metals (including barium, chromium, lead, manganese, and zinc). It is not currently known which type of infill would be used under the Project, because other natural products such as cork and sand are also commonly used. However, for the purposes of conservatively evaluating potential impacts, it is assumed here that recycled tire crumb pieces would be used. Impacts related to the routine use of the crumb infill would be significant if the use resulted in adverse health effects due to inhalation of vapors and particulates from the synthetic turf, ingestion of the infill, or dermal contact with the synthetic turf materials.

The Office of Environmental Health Hazard Assessment (OEHHA) conducted a literature review of available studies that evaluated potential health hazards of the recycled crumb infill in outdoor fields and found that the chemical concentrations they measured were unlikely to produce adverse health effects in persons using these fields (OEHHA, 2009). Similarly, the Washington State Department of Health also evaluated the potential risks and determined that the available research on crumb rubber currently does not suggest a significant public health risk (WDOH, 2018). However, OEHHA is currently in the process of studying this issue further, including conducting a human health risk assessment, and is supposed to release its findings in 2019. The U.S. EPA is also evaluating the issue and is in the process of determining potential health risks in a report to be released at a later date.

A new ASTM International standard helps test the safety of synthetic turf infill – also known as crumb rubber. The specification (F3188, Specification for Extractable Hazardous Metals in Synthetic Turf Infill Materials) measures the amount of certain metals that could be extracted from turf infill if accidentally swallowed by users of the field. Mitigation measure HAZ-1 would require that the turf material used under the proposed project, meet this standard.

In addition, synthetic turf maintenance could include the use of solvents and adhesives. However, normal maintenance would consist of spot washing (using only dish soap and water, no disinfectants or special detergents would be used). Although small amounts of solvents and adhesives could be required to make minor repairs, they would not be used in large quantities; only in spot applications at the specific repair location. The turf fields would likely be on a site-specific maintenance schedule, with activities and timing similar to that of other synthetic turf fields in the region. For example, sweeping would likely occur every 2 weeks, or as needed, and turf grooming every 5 to 8 weeks. Repair of turf, removal of graffiti, and spot washing with soap and water would be conducted as needed and is not likely to result in any adverse health effects.

While available research suggests there is no substantive health risk associated with recycled tire crumb in synthetic turf, there is enough concern to warrant further research which is currently ongoing. As a result, in an abundance of caution due to the existing data gaps in determining the potential health risks of recycled tire crumb, the potential impact is considered significant. Mitigation measure HAZ-1 would reduce the potential for health impacts from exposure to hazardous chemicals in some turf products by limiting the selection of turf products to those containing natural materials, those for which the best available science has concluded they pose not substantial health risk, and those which meet established standards for safety. With implementation of HAZ-1, the impact would be less than significant.

Mitigation Measures

Mitigation Measure HAZ-1. Synthetic Turf Infill.

The use of infill materials for the synthetic turf playing fields shall be restricted to use of natural materials such as cork and/or sand, or a type of synthetic material that meets or exceeds the accepted health risk criteria of one in a million cancer risk. The determination regarding product safety may rely upon expert review by County health officials, peer-reviewed study provided by the manufacturer, or criteria developed by other local governments for the selection of safe turf products (e.g., City and County of San Francisco). Recycled tire crumb infill shall not be used unless the forthcoming (2019) Office of Environmental Health Hazard Assessment (OEHHA) study, or the forthcoming U.S. Environmental Protection Agency study concludes the product meets or exceeds the acceptable health risk criteria (i.e., less than one in a million cancer risk). In addition, Regional Parks shall not select any synthetic turf product that does not meet the ASTM F3188 requirements, and the requirement for ASTM F3188 compliance shall be included in Regional Parks' bid solicitation for synthetic turf installation.

- b) **Less than Significant.** Hazardous materials such as petroleum products, solvents, paints, oils, and herbicides may be used and stored on-site as a part of construction and routine park operations. As mentioned above, the quantities would likely be relatively limited and packaged in consumer quantities and used in accordance with manufacturer recommendations. Construction activities that involve heavy equipment may require refueling capabilities which could involve bulk fuel storage. However, as noted above, the implementation of the SWPPP during construction would include BMPs for the safe

- management of hazardous materials to avoid accidental release and upset conditions. In the unlikely event of a release, the SWPPP would also include spill response measures that would allow a contractor to contain and control any release to minimize any adverse effects to the public or environment. Implementation of the required BMPs would minimize the potential for accidental release and provide the measures necessary to address any inadvertent release should it occur. Therefore, the potential impact related to upset and accident conditions would be less than significant.
- c) **No Impact.** Although there would be a need for the use of some limited quantities of hazardous materials for construction and then also during operational maintenance activities, the Project elements would not include any substantive hazardous emissions. The nearest school or daycare center to the Project site is the El Verano Elementary school which is located approximately 0.35 miles to the north of the northern boundary of the site. Therefore, there would be no impact related to emissions within 0.25 miles of a school.
- d) **Less than Significant.** According to the environmental database review, the Project site is not included on the Envirostor or Geotracker databases as a site with a known release (DTSC, 2018 and SWRCB, 2018). There are four sites within a 0.25 mile radius of the Project site on the Geotracker database; however, all four of these sites are currently listed as closed indicating that no further threat to the public or environment remains. Therefore, while the Project would include ground disturbing activities, based on current use of the site and the review of environmental databases, the Project would not create a significant hazard to the public or environment as a result construction or operation and maintenance activities. The potential impact would be less than significant.
- e, f) **No Impact.** The Project site is located more than 2 miles from any airport or airstrip. The nearest airport to the site is the Project site is the Sonoma Skypark which is over 3.5 miles south of the site. Therefore, the Project would not be within an area covered by an airport land use plan and there would be no impact related to safety hazards near airports and private airstrips.
- g) **Less than Significant.** The Project would include some minor improvements to the existing roadways including the widening of the existing entry driveway to provide more efficient ingress and egress, which could only aid in an emergency response or evacuation situation. Otherwise, there would be no permanent road closures or other physical interferences that could interfere with the County's ability to implement its Hazard Mitigation Plan adopted April 2017. Therefore, the potential impact related to emergency or evacuation plans would be less than significant.
- h) **Less than Significant.** Over half of Sonoma County has been rated as moderate or high fire hazard risk (Sonoma County, 2017). According to mapping compiled by the Association of Bay Area Governments, the eastern border of the Project site abuts what is considered to be an area that is susceptible to wildfire threat (ABAG, 2018). The proposed improvements to the site would not represent any substantive change to the

wildfire threat that already exists at the site. However, the improvements could increase the public use of the site which could increase the potential exposure to adverse effects from a wildfire. All the proposed improvements involve the use of outdoor facilities that make the threat of a wildfire hazard much less threatening. The existing Boys and Girls Club building would not change with the Project and is built in accordance with Fire Code requirements. Therefore, considering the proposed uses associated with the potential increased use of the park, the potential impacts related to wildfires would be less than significant.

Cumulative Impacts

Depending on the pathway of exposure, the geographic scope for cumulative effects relating to hazards and hazardous materials would be the watershed boundary, groundwater basin, or extent of any potentially affected soils. Hazardous materials delivery routes for the region would also be included in the event of a traffic accident-related spill. Cumulative hazards and hazardous materials-related effects could arise at any point from the Project construction or operation and related activities.

Hazards and hazardous materials are generally very heavily regulated under existing federal, state, and local requirements for the safe transport, storage, use, and disposal. Cumulative hazardous materials effects could occur if activities at the Project site and other past, existing and proposed projects, together, could significantly increase risks in the regional vicinity of the Project site. However, most routine hazardous materials activities at the Project site and immediate vicinity would likely involve relatively small quantities of hazardous materials. Any health or safety effects of routine hazardous materials use would be limited to the specific individuals using the materials and anyone in the immediate vicinity of the use. No interaction would occur between these routine activities and similar activities at different sites.

Cumulative health and safety impacts could occur if Project-related hazardous materials or hazards were to interact or combine with those of other existing and proposed projects. This is only likely to occur through the following mechanisms: air emissions; transport of hazardous materials and waste to or from the Project site; inadvertent release of hazardous materials to the sanitary sewer, storm drain, or non-hazardous waste landfill; and potential accidents that require hazardous materials emergency response capabilities. Air emissions are addressed above in Section 2.3, Air Quality. The proposed Project as well as other past, present, and future projects would be required to adhere to existing regulatory requirements for the appropriate handling, storage, and disposal of hazardous materials that are designed to minimize exposure and protect human health and the environment. Cumulative increases in the transportation of hazardous materials and wastes would cause a less-than-significant impact because the probability of accidents to begin with is low and for them to occur simultaneously is even more remote. Plus, the use of legally required packaging and other transportation regulations minimizes the consequences of potential accidents. In addition, all projects in the area would be required to comply with the same laws and regulations as the Project. This includes federal and state regulatory requirements for transporting (Cal EPA and Caltrans) hazardous materials or cargo (including fuel and other materials used in all motor vehicles) on public roads or disposing of

hazardous materials (Cal EPA, DTSC, CCEHD). Therefore, this cumulative impact would be less than significant.

References

- Association of Bay Area Governments (ABAG), *Wildland-Urban Interface*. Available at: <http://gis.abag.ca.gov/website/Hazards/?hlyr=firePerimeters>. Accessed April 19, 2018.
- California Department of Toxic Substances Control (DTSC), 2018. EnviroStor Database. Available at: <http://www.envirostor.dtsc.ca.gov/public/map/?myaddress=965+Verano%2C+Sonoma+CA>. Accessed April 19, 2018.
- Office of Environmental Health Hazard Assessment (OEHHA), 2009. *Chemicals and Particulates in the Air Above the New Generation of Artificial Turf Playing Fields, Literature Review and Data Gap Identification*, July 2009.
- State Water Resources Control Board (SWRCB), 2018. *Geotracker Database*. Available at: <http://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=965+Verano%2C+Sonoma+CA>. Accessed April 19, 2018.
- Washington State Department of Health (WDOH), 2018. *Synthetic Turf and Crumb Rubber*, <https://www.doh.wa.gov/CommunityandEnvironment/Schools/EnvironmentalHealth/syntheticTurf>, accessed November 12, 2018.

Hydrology and Water Quality

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
9. HYDROLOGY AND WATER QUALITY — Would the project:				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

The Project site is located within the Sonoma Creek watershed which drains an area of approximately 170 square miles between ridges of the Sonoma and Mayacamas Mountains. Sonoma Creek begins on Sugarloaf Ridge and flows 31 miles to North San Pablo Bay. The watershed is bounded by the Petaluma River watershed on the west, the Napa River watershed on the east, and the Russian River watershed on the north. Land use within the watershed is predominantly rural with open space, grazing and agriculture, especially viticulture (wineries). Sonoma Creek is the principal drainage for the Sonoma Valley sub-basin. The southern Sonoma Valley basin receives an average of 20 to 24 inches of precipitation a year and the highest runoff occurs shortly after rainfall. Sonoma Creek meanders through the western portion of the site.

During construction, the protection of water quality is largely controlled through required best management practices (BMPs) consistent with the National Pollution Discharge Elimination System (NPDES) Construction General Permit. During operation, all proposed improvements are required to meet the NPDES Municipal Separate Storm Sewer System (MS4) drainage control requirements.

- a) **Less than Significant with Mitigation.** The proposed park improvements would require earthwork activities that would include the stripping of surface vegetation, excavation of soils, and the placement of imported engineered soils on the Project site. During construction, existing impervious surfaces and established ground cover that serves to stabilize site soils currently, would be removed, potentially resulting in increased erosion and sedimentation. Construction would also require the use of gasoline and diesel-powered heavy equipment. Chemicals such as gasoline, diesel fuel, lubricating oil, hydraulic oil, lubricating grease, automatic transmission fluid, paints, solvents, glues, and other substances could be used during construction. Mishandling of any of these substances could degrade the quality of the surface water runoff and adversely affect receiving waters.

Construction activities at the Project site would be required to comply with the NPDES Construction General Permit, which requires the project applicant to prepare a Stormwater Pollution Prevention Plan (SWPPP). The project SWPPP would list the specific erosion control and storm water quality best management practices (BMPs) that would be employed to minimize contamination of storm water runoff, along with the proper methods of installation, and maintenance of BMPs. In addition to erosion control BMPs, the SWPPP would include BMPs for preventing the discharge of other NPDES pollutants besides sediment (e.g., paint, solvents, concrete, petroleum products) to downstream waters. With implementation of these required construction BMPs, the potential impacts to water quality would be reduced to less than significant levels.

Once constructed, the proposed improvements include some elements such as the expansion of the existing parking lot, the new concession and restroom buildings, the bicycle track, the pickle ball courts, paved pathways, and expanded play areas that would result in a net increase in impervious surfaces. Any increase in impervious area has the potential to increase the efficiency by which sediment and other pollutants are delivered to receiving waters and for the Project site, Sonoma Creek. The introduction of new paved areas and parking lots creates the potential for accumulation and release of petroleum hydrocarbons, lubricants, sediments, and metals (generated by the wear of automobile parts), which, if not managed appropriately, could violate water quality standards. However, all of the proposed improvements are required to adhere to drainage control requirements of the County's NPDES MS4 permit.

In general, existing storm water management regulations including the NPDES MS4 requirements, which implement federal Clean Water Act requirements, contain drainage control requirements that have proven effective in minimizing the transport of storm water runoff pollutants commonly associated with land uses such as those proposed by

the Project. The NPDES MS4 Permit requires both source control measures and low impact design (LID) standards for post-construction storm water treatment. Source control measures are structural controls and operational procedures to limit pollutants at their source. For example, the expanded parking lot would include bio-swales for the treatment of storm water runoff from the parking lot which likely has the highest potential for the introduction of pollutants with the associated automobile usage.

Outside of impervious surfaces, the project includes improvements to the playing fields which would include construction of new synthetic turf fields. The use of synthetic turf on athletic fields has generated some public concern over the potential for pollutants in leachate and stormwater runoff from these materials, particularly chemicals found in recycled tire crumb used as infill material in some synthetic turf products. According to a 2007 study contracted by the California Office of Environmental Health Hazard Assessment (OEHHA), the findings indicate that concentrated leachate produced in the laboratory from tire shreds, crumb rubber, or whole tires was toxic to a variety of aquatic organisms in 19 of 31 studies evaluated (IWMB, 2007). However, the concentrations rapidly decreased a few feet away from the trench the tire shreds were contained in. The report concluded that when installations of playfields are above the water table, and are not in long-term contact with the groundwater, risks to groundwater quality associated with use of synthetic turf materials containing tire shreds are low. However, due to the potential variance in the composition of the infill materials, implementation of Mitigation Measure HYD-1 would require that the chosen product meet leachate standards that are protective of water quality.

Otherwise, the regulatory requirements for drainage features of the proposed improvements would include source control measures, as appropriate, to prevent storm water discharge from violating water quality requirements. With implementation of these NPDES regulatory requirements and the additional measures outlined in Mitigation Measure HYD-1, proposed improvements would be ensured to include the storm water treatment features as necessary to protect water quality. As a result, with implementation of Mitigation Measure HYD-1, potential water quality impacts would be reduced to less-than-significant levels.

Mitigation Measures

Mitigation Measure HYD-1. Synthetic Turf Infill.

Regional Parks shall not select a synthetic turf field product unless and until it confirms the product's leachate potential meets California drinking water standards for volatile organic compounds, semi-volatile organic compounds and metals. Regional Parks' bid solicitation shall include a requirement that prospective vendors provide the information regarding the turf composition when submitting project bids, and Regional Parks shall reject any bids with incomplete information or insufficient data. The bid solicitation shall also include a requirement that the vendor submit a product analysis quantifying the content of its product that demonstrates maximum levels for soluble chromium, lead, and zinc in infill materials are below California drinking water standards.

- b) **Less than Significant.** The park is served by well water. The anticipated increase in visitation would result in a corresponding increase visitor demand for water for drinking and restroom facilities. However, the replacement of grass ballfields with synthetic turf would reduce the amount of well water used for ball field irrigation. Therefore, the Project would not be expected to involve substantial changes in groundwater extraction. The Project would introduce a small amount of new impervious surfaces associated with parking lot expansion, entrance widening and other improvements (pickle ball courts, pre-fabricated concession/restroom buildings) that are dispersed through the site. The majority of the Project site would remain as open space and runoff from these new impervious surfaces would be directed to bioswales and adjacent open space areas, and thus have no substantive impact to groundwater recharge potential. Thus, the Project would not deplete groundwater supplies or interfere substantively with groundwater recharge such that there would be negligible change to the underlying water table. Therefore, the potential impact would be less than significant.
- c) **Less than Significant.** The Project includes parking lot expansion, entrance widening, paved pathways, construction of new facilities (pre-fabricated concession/restroom buildings, pickle ball courts, play area), and restoration and enhancement of Sonoma Creek. These activities would alter existing drainage patterns. As noted above, all construction activities for all elements of the Project would include implementation of BMPs in accordance with NPDES Construction General Permit that would minimize the potential for erosion or sedimentation during construction.

The Project site is 85 acres and even after the construction of the proposed improvements and associated new impervious surfaces, the site would remain largely open space with pervious surfaces. Proposed improvements that add impervious surfaces would be required to include LID storm water features such as the bioswales that will treat storm water runoff in the parking lot in accordance with NPDES MS4 requirements. Incorporating these LID features into the Project design would be effective in minimizing the potential impact or erosion or transport of siltation.

Restoration improvements would include landscaping modifications, such as removal of non-native and invasive vegetation and planting of native and/or ornamental trees, shrubs, ground cover and lawn. Restoration in the riparian zone would include improvements such as eradication of informal trails and construction of timber steps to reduce erosion in the vicinity of the creek. All disturbed areas from construction would be revegetated to protect these areas against future erosion. Therefore, with implementation of the drainage control requirements and restoration elements would have a less-than-significant impact related to erosion or sedimentation.

Other elements of the Project, including the recreation facilities, road improvements, and parking lot expansion would be required to adhere to NPDES MS4 requirements, as applicable. These requirements would ensure that storm water management features are incorporated into project design such that the potential for erosion or sedimentation is minimized. As a result, the potential for erosion or siltation would be less than significant.

- d) **Less than Significant.** As noted above, the Project would alter the existing drainage patterns in the areas of proposed improvements. If not designed appropriately, these activities could alter the drainage patterns such that flooding potential on- or off-site is increased.

The Project elements that would introduce new impervious surfaces such as parking lot expansion, road widening, concessions/restroom buildings, paved pathways, and expanded recreational facilities would be required to include drainage control features in accordance with the NPDES MS4 requirements. These requirements would include implementation of LID drainage features such as bioswales that would minimize the peak storm water flow volumes and allow for onsite infiltration of storm water. Incorporation of these drainage control requirements into the Project design would ensure that the potential for on- or off-site flooding would be minimized.

Therefore, with implementation of the Project design features in accordance with the existing drainage control requirements, the Project would have a less than significant impact related to flooding both on- and off-site.

- e) **Less than Significant.** The Project site consists largely of open pervious spaces and would continue to be largely pervious following construction of the proposed Project. The additional of LID features such as bio-swales would provide for additional runoff to be retained onsite for infiltration. Implementation of these LID features in accordance with NPDES MS4 permit requirements would ensure that the storm water capacity would not be exceeded. The potential impact would be less than significant.
- f) **Less than Significant.** The Project does not include any other discharges than what is already discussed above in response to question 2.9a. Therefore, the potential impact related to degradation of water quality would be less than significant.
- g) **No Impact.** The proposed Project has no residential element to it and therefore would have no impact related to placing housing in a 100-year flood zone.
- h) **Less than Significant.** Sonoma Creek runs through the western portion of the Project site and has a 100-year flood zone hazard area associated with it. The flood zone is limited to the riparian corridor of the creek and does not extend into any of the proposed improvements associated with the Project with the exception of some of the creek access improvements. These creek access improvements are not substantial and would not impede or redirect flood flows. The potential impact would be less than significant.
- i) **Less than Significant.** The Project site is not protected by a levee system and according to mapping compiled by the Sonoma County of Emergency Services, the site is not located within a dam inundation hazard zone (Sonoma County, 2011). Therefore, the potential impact from failure of a levee or dam would be less than significant.
- j) **No Impact.** The Project site is not located adjacent to the coast or any semi-enclosed or enclosed body of water such that there would be no potential to be adversely affected by

seiche or tsunami waves. The Project site is also located within an area that has relatively gentle topography and is not likely to be susceptible to mudflows. There would be no impact related to this criterion.

Cumulative Impacts

The geographic extent of cumulative effects with respect to Hydrology would be the entire Sonoma Creek watershed. The regulatory context of hydrology includes required state and regional requirements that are based on Clean Water Act and Regional Basin Plans to ensure that water quality goals are being achieved through improvements in storm water management at a local level. Sonoma Creek and Suisun Bay which is where the creek empties into, have been adversely affected by urban development and industrial land uses over the years.

Implementation of the proposed Project, together with past, present, and other reasonably foreseeable future projects in the region could cumulatively increase storm water runoff and pollutant loading to receiving waters. The proposed Project and other future projects in the region would be required to comply with drainage and grading requirements intended to control runoff and regulate water quality at each development site. Any new project would be subject to the same permitting requirements as the proposed Project, and would be required to demonstrate that adequate controls for both storm water quality and quantity are incorporated into project design specifications. Since the regulatory requirements have been developed to approach water quality on a watershed scale and do not allow for any substantive increase in storm water quantity or decrease in storm water quality with individual projects, the cumulative impact from these projects would be less than significant.

References

- Integrated Waste Management Board (IWMB), 2007. *Evaluation of Health Effects of Recycled Waste Tires in Playground and Track Products*. January 2007.
- Sonoma County of Emergency Services (Sonoma County). 2011. *Sonoma County Hazard Mitigation Plan, Figure 8.7, Dam Failure Inundation*, September 12, 2011.

Land Use and Land Use Planning

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
10. LAND USE AND LAND USE PLANNING — Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

- a) **No Impact.** The Project would implement facility improvements and updates to the existing Maxwell Farms Regional Park. Although the Project site is bordered by residential properties to the west, north, and south, the Project would not divide an established community since there would be no changes to the existing footprint of the park.
- b) **Less than Significant.** The County's Zoning Map shows the park with the following classifications: Public Facilities District (PF), Scenic Resources Combining District (SR), and Valley Oak Habitat Combining District (VOH) (County of Sonoma, 2018d). The purpose of the PF District is to provide sites which serve the community or public need, and to protect such sites from encroachment of incompatible uses. Facilities owned and operated by the county are permitted (County of Sonoma, 2018a).

The purpose of the SR District is to preserve the visual character and scenic resources of land in the county and to implement the provisions of Sections 2.1 (General Goals and Policies), 2.2 (Residential Use Policy), and 2.3 (Commercial Use Policy) of the general plan (County of Sonoma 2018b). The northern portion of the park along Verano Avenue and Highway 12 is within the SR District, and existing and planned uses for this area include landscaping and berm height reduction, which would improve site lines through the park, including to both the developed and scenic wooded portions of the Project site. As described further in Section 2.1, Aesthetics, the Project would not have a substantial adverse effect on the scenic resources of the site or its surroundings. Therefore, the Project would not be expected to conflict with the purpose of the SR District.

The purpose of the VOH District is to protect and enhance valley oaks and valley oak woodlands and implement Section 5.1 (Timber Resources) of the general plan resource conservation element (County of Sonoma, 2018c). As described further in Chapter 1, Project Description, the Project does not propose the removal of native trees, including valley oak. Nevertheless, as also discussed in Section 2.4, Biological Resources, Regional Parks would comply with the provisions of the Sonoma County Tree Protection Ordinance (Section 26-88-010(m)) (1986). Therefore, the Project would not be expected to conflict with the purpose of the VOH District.

The County's Land Use Map shows the park as designated for Public/Quasi-Public (PQP) uses (County of Sonoma, 2018d). PQP uses are designed to provide sites that serve the community or public need and are owned and operated by government agencies, non-profit entities, or public utilities. Permitted uses include parks (County of Sonoma, 2008).

The Project would renovate and update existing uses at Maxwell Farms Regional Park, and would not introduce new land uses to the Project area. Overall, Project implementation would not be such that new components would conflict with any applicable land use plans, policies, or regulations, and the impact would be less than significant. Other topical resource sections of this IS/MND address plans and policies relative to the respective resource topics.

- c) **No Impact.** No Habitat Conservation Plans or Natural Community Conservation Plans cover the area of the Master Plan. Thus, the Project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan, and there would be no impact to habitat conservation plans from implementation of the Project.

Cumulative Impacts

The Project would have no impact related to dividing an established community or conflicting with a habitat conservation plan. Further, the Project would not have any apparent conflicts with applicable plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect. Nor would the Project contribute to another's potential to conflict with such regulations. For these reasons, the Project would have a less-than-significant cumulative impact related to land use and land use planning.

References

- County of Sonoma, 2008. Sonoma County General Plan 2020, Land Use Element, Section 2.5 Public and Quasi Public Land Use Policy.
- County of Sonoma, 2018a. Code of Ordinances, Article 52, PF Public Facilities District. Available at: https://library.municode.com/ca/sonoma_county/codes/code_of_ordinances?nodeId=CH26SOCOZORE_ART52PFPUFADI. Accessed April 23, 2018.
- County of Sonoma, 2018b. Code of Ordinances, Article 64, SR Scenic Resources Combining District. Available at: https://library.municode.com/ca/sonoma_county/codes/code_of_ordinances?nodeId=CH26SOCOZORE_ART64SRSCRECODI. Accessed April 23, 2018.
- County of Sonoma, 2018c. Code of Ordinances, Article 67, VOH Valley Oak Habitat Combining District. Available at: https://library.municode.com/ca/sonoma_county/codes/code_of_ordinances?nodeId=CH26SOCOZORE_ART67VOVAOAHACODI. Accessed April 23, 2018.
- County of Sonoma, 2018d. Permit Sonoma GIS, Zoning and Land Use. Available at: <https://sonomamap.maps.arcgis.com/apps/webappviewer/index.html>. Accessed April 16, 2018.

Mineral Resources

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
11. MINERAL RESOURCES — Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

- a, b) **No Impact.** There are no known mineral resources within the Project site, and no operational mineral resource recovery sites at the Project site or in the vicinity (County of Sonoma, 2018). Therefore, the Project would have no impact to mineral resources since it would not result in the loss of availability of a known mineral resource that would be of value to the region or the state, or result in the loss of a locally-important mineral resource.

Cumulative Impacts

The Project would have no impact on mineral resources; therefore, there would be no cumulative impact.

References

County of Sonoma, 2018. Permit Sonoma GIS, Zoning and Land Use. Available at: <https://sonomamap.maps.arcgis.com/apps/webappviewer/index.html>. Accessed April 16, 2018.

Noise

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
12. NOISE — Would the project result in:				
a) Exposure of persons to or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project located in the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

- a) **Less than Significant.** The Project would be located in an unincorporated area of Sonoma County. Pursuant to Policy NE-1a of the Sonoma County General Plan 2020, a “noise impact” would occur if sensitive developments are exposed to traffic noise levels above 60 dBA L_{dn} . Stationary noise sources that expose a nearby sensitive receptor to a noise level of 50 dBA L_{eq} between 7:00 a.m. to 10:00 p.m. or 45 dBA L_{eq} between 10:00 p.m. to 7:00 a.m. would also be considered a “noise impact” under Policy NE-1b (Sonoma County, 2012). Neither the County’s general plan or municipal code contain any policies or standards related to construction noise.

Operational Traffic

The proposed improvements to Maxwell Farms Regional Park would result in increased traffic volumes on local roadways, particularly along Verano Avenue and S.R. 12 as proposed improvements would accommodate an increase in park visitors. Using algorithms from the FHWA’s *Traffic Noise Model Technical Manual* and the estimated Project traffic volumes provided in the *Maxwell Farms Regional Park Transportation Impact Analysis Report* (TJKM, 2018), traffic noise levels were estimated for roadway segments near the Project site under Existing and Existing plus Project conditions. The segments analyzed and the associated results of the modeling are shown in **Table 2-5**. As shown in Table 2-5, sensitive receptors adjacent to roadway segments affected by the Project would not be exposed to traffic noise levels that would exceed the County’s 60 L_{dn} standard under the Existing plus Project condition. Therefore, the Project would not generate a substantial

increase in traffic noise levels in excess of standards established in the local general plan or noise ordinance. This would be a less-than significant impact.

TABLE 2-5
TRAFFIC NOISE LEVELS ALONG STREETS
UNDER EXISTING AND EXISTING PLUS PROJECT CONDITIONS

Roadway Segment	Traffic Noise Level 100 feet from Center of Roadway, dBA, L_{dn} ¹				
	Existing	Existing plus Project	Incremental Increase	Significant? (Yes or No) ²	Exceed 60 dBA L_{dn} ? ³
Verano Avenue, west of Main Street	56.6	56.7	0.1	No	No
Verano Avenue, from Main Street to Sonoma Highway	56.9	57.1	0.2	No	No
Verano Avenue, east of Sonoma Highway	54.1	54.2	0.1	No	No
Sonoma Highway, north of Verano Avenue	58.9	59.0	0.2	No	No
Sonoma Highway, south of Verano Avenue	59.2	59.2	0.1	No	No

NOTES:

¹ Noise levels were determined using methodology described in FHWA's *Traffic Noise Model Technical Manual* and traffic volumes provided in the *Maxwell Farms Regional Park Transportation Impact Analysis Report* prepared by TJKM (TJKM, 2018)

² Traffic noise increases that exceed 5 dB are considered to result in a substantial permanent increase in ambient noise levels.

³ Sensitive receptors exposed to traffic noise levels that exceeds 60 dBA L_{dn} would result in a violation of the County of Sonoma General Plan Policy NE-1a.

SOURCE: ESA, 2018

Recreational Activities

The primary onsite noise sources during Project operation would be onsite recreational sporting events at the proposed baseball complex, soccer complex, and tennis and pickle ball courts. The park currently accommodates actively used recreational facilities including two baseball fields, two soccer fields, five tennis courts, a volleyball court, and a playground, among other facilities. Consequently, operational noise increases would only result from modest increases in event frequency accommodated by additional project facilities and potentially greater numbers of spectators.

Noise generated during onsite sporting events would result from spectator voices. It is expected that public address speakers would not be used, and organized sporting events within the Project site would be restricted to the hours between sunrise and 10:00 p.m. The Environmental Protection Agency's (EPA) published document *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety* (EPA, 1974) estimates the noise level of raised voices at 72 dBA L_{eq} from a reference distance of 3.3 feet. Assuming 50 people attending a given sporting event, the total noise would be 89 dBA L_{eq} from a distance of 3.3 feet. The distance between the onsite soccer fields and the nearest residential property line to the north is approximately 400 feet. Based on the propagation rate of 7.5 dB per doubling of

- distance, the noise level at the closest residence would be 37 dBA L_{eq} , which is below the County's daytime exterior noise standard of 50 dBA L_{eq} . Therefore, the Project would not generate a substantial increase in sporting event noise levels in excess of standards established in the local general plan or noise ordinance, and the impact would be less than significant.
- b) **Less than Significant.** Vibration can be interpreted as energy transmitted as waves through the ground. These energy waves generally dissipate with distance from the vibration source. Since energy is lost during the transfer of energy from one particle to another, vibration attenuates rapidly with distance. Operations and maintenance of the Project would not include any sources of vibration that would be considered excessive. Groundborne vibration and noise associated with some construction activities, including the use of pile drivers, blasting, and jack hammers can cause excessive vibration. The Project would not include any such activities. Groundborne vibration and noise levels generated by equipment required to construct the Project would be minimal and would not be perceptible beyond a distance of 25 feet from the source (FTA, 2006). No existing structures are located close enough to the Project site such that any damage related to groundborne vibration from construction activities would occur. The nearest residence is located approximately 140 feet north of the Project site boundary. From this distance, groundborne vibration from project construction equipment would not be noticeable by the nearest sensitive receptor, and the impact would be less than significant.
- c) **Less than Significant.** This evaluation uses a 5 dB increase in noise exposure, which is considered a readily perceptible increase in noise levels (Caltrans, 2013a), to assess the significance of operational noise increases in ambient noise. That is, a significant impact would occur if the project caused an increase in noise levels of 5 dB or greater, relative to ambient noise levels.
- As previously discussed under checklist question 2.12a, above, traffic noise levels along local roadways affected by the Project were modeled under Existing and Existing plus Project conditions. As shown in the Table 2-5, the traffic noise increases associated with the full build-out of the Project would range between 0.1 and 0.2 dB relative to existing conditions. This potential increase in noise along these roadway segments would be negligible and would not exceed the applied significance threshold. Consequently, existing noise-sensitive land uses located adjacent to roadways affected by the Project would not be exposed to noise increases exceeding the significance thresholds; therefore, the Project's impact on roadway traffic noise would be less than significant.
- d) **Less than Significant.** Construction noise levels at and near the Project site would fluctuate depending on the type, number, and duration of use of various pieces of construction equipment. Given the low level of construction-related vehicle trips associated with hauling and commuting workers, these trips would not be expected to raise ambient noise levels along haul routes. **Table 2-6** shows typical noise levels produced by various types of construction equipment that would operate at the Project

site. Construction activities would take place during daytime hours from 8:00 a.m. and 5:00 p.m., Monday through Friday.

TABLE 2-6
REFERENCE CONSTRUCTION EQUIPMENT NOISE LEVELS – (50 FEET FROM SOURCE)

Type of Equipment	L_{max} , dBA	Hourly L_{eq} , dBA/ Percent Used ¹
Backhoe	80	76/40
Compactor	80	73/20
Bobcat	80	76/40
Grader	85	81/40
Excavator	85	81/40
Paver	85	82/50
Chain Saw	85	78/20
Concrete Mixer Truck	85	81/40
Generator	82	79/50

NOTES:

¹ "Percent used" were obtained from the FHWA Roadway Construction Noise Model User's Guide.

SOURCE: FHWA, 2006.

Noise impacts from construction generally result when construction activities occur during the noise-sensitive times of the day (early morning, evening, or nighttime hours), in areas immediately adjacent to sensitive receptors, or when construction noise lasts for extended periods of time. There are residences located within the Sonoma Oaks Mobile Home Park located approximately 30 feet from the Project's southern boundary. These residences would be exposed to construction noise during minor excavation, grading and resurfacing activities associated with the trail improvements. Assuming an attenuation rate of 7.5dB per doubling of distance, and the operation of grader for trails improvements, the residence located 30 feet from the Property's southern boundary would be exposed to a noise level of 87 dBA L_{eq} .

Although there are no applicable local policies or standards available to judge the significance of short-term daytime construction noise levels, the FTA's *Transit Noise and Vibration Impact Assessment* has identified a daytime 1-hour L_{eq} level of 90 dBA as a noise level where adverse community reaction could occur at residential land uses (FTA, 2006). This noise level is used here to assess whether construction-related noise levels would cause a substantial temporary or periodic increase in ambient noise levels at sensitive receptor locations. Although Project-related construction noise levels may be audible at the nearest sensitive receptor locations, they would not exceed the 90 dBA L_{eq} threshold; therefore, the temporary increase in ambient noise levels would be less than significant.

- e) **No Impact.** The Project area is located approximately 7.4 miles from the Petaluma Municipal Airport. According to the County of Sonoma Comprehensive Airport Land

Use Plan (CALUP), the Project area is located approximately 7.2 miles from the airport's 55 dBA CNEL noise contour. Therefore, the Project would not expose people residing or working in the Project area to excessive noise levels. No impact would occur.

- f) **No Impact.** The Project is not located within the vicinity of a private airstrip. The nearest airstrip, Sonoma Skypark, is located approximately 3.5 miles from the Project area and would not influence the noise environment at the Project site. Therefore, no impact would occur.

Cumulative Impacts

The geographic context for changes in the noise and vibration environment due to development of the Project would be localized in an urban area of the County of Sonoma, as well as along roadways that would serve the Project. In order to contribute to a cumulative construction noise impact, another project in close proximity would have to be constructed at the same time as the Project. There are numerous development projects in several locations near the Project site, currently in the planning stages that could be constructed and operational in the foreseeable future. The closest cumulative project near the Project site is the Phase 2 Sonoma Trunk Sewer Replacement Project (No. 4).

As previously discussed, construction activities could adversely affect off-site noise-sensitive land uses if located within close proximity to where Project-related construction would occur. If Project-related construction activities were to coincide with another development, the combined effect could result in the exposure of off-site noise-sensitive land uses to higher noise levels than what was predicted under the Project. The closest cumulative project to the Project site is the Phase 2 Sonoma Trunk Sewer Replacement Project, which is expected to be constructed from 2018 to 2020. The Phase 2 construction activities would occur from Highway 12 and Ramon Street, through Maxwell Farms Regional Park and to West Verano Avenue. Given the size of the Maxwell Farm Regional Park, it is not expected that Project-related and Phase 2 Sonoma Trunk Sewer Replacement Project construction equipment would be operating concurrently or sequentially in the same location or immediate vicinity. Therefore, the combined construction activities would not expose the nearest sensitive receptor to noise and vibration levels higher than what was already assessed under the Project.

Traffic noise levels were predicted in terms of the L_{dn} at a representative distance of 100 feet from the center of the roadways for the Existing, Cumulative and Cumulative plus Project conditions. Results of this analysis are summarized in **Table 2-7**. As shown in Table 2-7, none of the roadway segments analyzed would exceed the applied 5 dB threshold for significant increase in traffic noise from the Project in the cumulative scenario compared to existing conditions and would not have a significant impact. Therefore, the Project, in conjunction with other cumulative development, would not have a significant cumulative impact associated with cumulative traffic noise.

TABLE 2-7
CUMULATIVE L_{DN} TRAFFIC NOISE LEVELS ALONG STREETS IN THE PROJECT VICINITY

Roadway Segment	Traffic Noise Level 100 feet from Center of Roadway, dBA, L _{dn} ¹						
	Existing	Cumulative without Project	Cumulative with Project	Cumulative with Project incremental increase above Existing Conditions	Cumulative with Project incremental increase above Cumulative without Project Conditions	Cumulatively Significant? (Yes or No) ²	Project's Contribution Significant? (Yes or No) ²
Verano Avenue, west of Main Street	56.6	57.9	58.0	1.3	0.1	No	No
Verano Avenue, from Main Street to Sonoma Highway	56.9	58.4	58.5	1.5	0.1	No	No
Verano Avenue, east of Sonoma Highway	54.1	55.6	55.7	1.5	0.1	No	No
Sonoma Highway, north of Verano Avenue	58.9	60.2	60.2	1.3	0.0	No	No
Sonoma Highway, south of Verano Avenue	59.2	60.6	60.7	1.4	0.1	No	No

NOTES:

¹ Noise levels were determined using methodology described in FHWA's *Traffic Noise Model Technical Manual* and traffic volumes provided in the *Maxwell Farms Regional Park Transportation Impact Analysis Report* prepared by TJKM (TJKM, 2018)

² Traffic noise increases that exceed 5 dB are considered to result in a substantial permanent increase in ambient noise levels.

SOURCE: ESA, 2018

References

- California Department of Transportation (Caltrans). 2013. *Technical Noise Supplement to the Traffic Noise Analysis Protocol*. September 2013.
- EPA. 1974. *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety*. March 1974.
- Federal Highway Administration (FHWA). 2006. *FHWA Roadway Construction Noise Model User's Guide*. January 2006.
- Federal Transit Administration (FTA). 2006. *Transit Noise and Vibration Impact Assessment*.
- Sonoma County, 2012. Sonoma County General Plan 2020 Noise Element. October 23, 2012May 2006.
- TJKM, 2018. Maxwell Farms Regional Park Draft Transportation Impact Analysis Report, prepared for Sonoma County Regional Parks. August 29, 2018.

Population and Housing

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
13. POPULATION AND HOUSING — Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

a, b, c) **No Impact.** The Project would not result in any new residential or business land uses on site, nor would it result in any new infrastructure to areas located off-site. Project construction would be expected to require a crew of approximately 10 workers for the duration of construction (approximately 34 months), and operations under the Project would not require an increase in park employees. Given the nature of the construction work and the site's proximity to population centers, it is expected the labor required for Project construction would be sourced from the regional labor pool. Accordingly, the Project would not cause substantial numbers of workers to relocate to the region for Project-related construction jobs. Relatedly, Project construction and operations would not require the displacement of any existing housing or people. For these reasons, the Project would have a no impact with respect to substantial population growth in the area, either directly or indirectly, and would it have no adverse impact on housing with respect to the construction of replacement housing elsewhere.

Cumulative Impacts

The Project would have no impact related to population and housing; therefore, there would be no cumulative impact.

Public Services

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
14. PUBLIC SERVICES — Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:				
i) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
v) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

a.i, a.ii) **Less than Significant.** As discussed in the Project Description, Project construction would be expected to require a crew of approximately 10 workers for the duration of construction (approximately 34 months). With the proposed facility updates and improvements to Maxwell Farms Regional Park, peak park visitation could increase from about 170 under existing conditions to about 270 under Project conditions (TJKM, 2018; Regional Parks, 2018). As noted in Chapter 1, Project Description, this estimate conservatively assumes all facilities are utilized to maximum capacity at the same time. Actual visitation at a given time would likely be lower. The small number of construction workers and the increase in visitation would not result in the need for substantially increased fire or police protection services for the Project area; therefore, the Project would not result in the substantial adverse physical impacts associated with the provision of new or physically altered fire or police protection facilities.

a.iii, a.iv, a.v) **No Impact.** As stated in Section 2.13, Population and Housing, no residential units would be constructed as part of the Project. The Project would not cause an increase in the number of school-aged children moving to the area. Although the Project would improve a recreational resource that could attract local or regional residents to the park, the Project would not cause future residential development or otherwise result in population growth that would necessitate the construction or alteration of schools, parks, or other government facilities, the construction of which could cause significant environmental impacts. Refer to section 2.15, Recreation, for additional discussion of impacts related to expansion of recreational facilities.

Cumulative Impacts

While cumulative projects listed in Table 2-1 could combine to cause temporary increases in demand for public services during construction, and slight permanent demand for public services throughout operation, the net increase of 10 workers during Project construction and the nominal increase in visitation after implementation would not be substantial enough to exceed demand for public services when combined with other cumulative projects. Therefore, the Project would have a less-than-significant contribution to a cumulative effect related to public services.

References

- Sonoma County Regional Parks (Regional Parks), 2018. Estimate of Maxwell Farms Regional Park Existing Visitation at Park Facilities Capacity.
- TJKM, 2018. Maxwell Farms Regional Park Draft Transportation Impact Analysis Report, prepared for Sonoma County Regional Parks. August 29, 2018.
-

Recreation

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
15. RECREATION:				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Discussion

- a) **Less than Significant.** As discussed in Chapter 1, Project Description, the Project site currently includes multiple active recreational areas, including two baseball fields, two soccer fields, five tennis courts, one sand volleyball court, a playground, picnic areas, a skateboard park, and approximately 2 miles of formal recreational trails.

The majority of public space and recreational resources in the Project area (area surrounding the Project site) that could be affected by the Project are managed by Sonoma County Regional Parks (Regional Parks) and the City of Sonoma. The Project area also includes open space areas managed by the Sonoma County Agricultural Preservation and Open Space District and baseball fields managed by the Sonoma County Little League. Regional Parks manages more than 50 parks and beaches in Sonoma County, which range from wild landscapes with hiking trails to parks with sports facilities and playgrounds (Regional Parks, 2018a). The City of Sonoma maintains 14 parks with a variety of amenities including picnic areas and playgrounds (City of Sonoma, 2018). **Table 2-8** provides more information on recreational resources in the Project area.

As discussed in greater detail in Chapter 1, the Project would renovate existing park facilities, including construction of a new baseball complex with two baseball fields, a new soccer complex with two soccer fields, a new sand volleyball court, two new pickle ball courts, new tennis court lighting, a new bicycle park, a new playground and fitness course, new picnic areas, pre-fabricated restroom and concession buildings, and an improved trail system. Construction is expected to occur in phases, with each phase being completed in approximately one year; however, due to funding uncertainty, Project construction could proceed in a different sequence than outlined in Table 1-2 or extend over a longer time frame, with fewer improvements occurring in a given construction phase. During construction, the portions of the park undergoing active construction would be closed to the public for safety reasons, and recreational facilities within those areas would not be accessible.

**TABLE 2-8
RECREATIONAL FACILITIES IN THE PROJECT AREA**

Resource	Jurisdiction	Distance from Project	Amenities/Facilities
Sonoma Valley Regional Park	Sonoma County Regional Parks	6 miles	Hiking trails Picnic areas
Larson Park	Sonoma County Regional Parks	1.5 miles	1 baseball field 1 soccer field 4 tennis courts Picnic area Playground
Moran Goodman Park	Sonoma County Regional Parks	4 miles	Picnic area Playground
Ernie Smith Community Park	Sonoma County Regional Parks	1 mile	1 baseball field Walking path Picnic Area Playground
Montini Open Space Preserve	Sonoma County Agricultural Preservation and Open Space District	2.5 miles	Hiking trails
Additional baseball fields: Hughes Field, Teeter Field, Paul's Field	Sonoma Valley Little League	2 miles	5 baseball fields
Pinelli Park	City of Sonoma Parks Division	2.5 miles	Picnic Area Playground
Olsen Park	City of Sonoma Parks Division	0.5 mile	Picnic Area Playground
Armstrong Park	City of Sonoma Parks Division	2.5 miles	Picnic Area Playground
Depot Park	City of Sonoma Parks Division	1.5 miles	Picnic Area Playground
Hertenstein Park	City of Sonoma Parks Division	2 miles	Picnic Area Playground
K.T. Carter Park	City of Sonoma Parks Division	2.5 miles	Picnic Area Playground
MacArthur Park	City of Sonoma Parks Division	2 miles	Picnic Area Playground
Nathanson Creek Park	City of Sonoma Parks Division	3 miles	Picnic Area Playground
Plaza Park	City of Sonoma Parks Division	2 miles	Picnic Area Playground

SOURCE: City of Sonoma, 2017; Sonoma County Regional Parks, 2018a,b,c,d; Sonoma Open Space, 2018.

Current scheduling at Maxwell Farms Regional Park for the baseball and soccer fields includes organized and open play from dusk to dawn, seven days a week (fields are typically closed from November to February). During construction of the proposed baseball and soccer complexes, the park would not be able to accommodate the organized and open play activities that presently occur under existing conditions. As a result, for these activities and events to continue, the organizers would need to locate and secure an alternative venue, likely at other parks in the region. The relocation of these activities and events would increase recreational use of other parks, resulting in a commensurate increase in wear of their recreational facilities. However, given the limited construction period, the seasonality of these activities and the times available for these events within the seasons (i.e., normally after school hours during the weekdays, and on weekends), and because the number of reservations at other fields and parks would be controlled during the Project construction period, the facilities of receiving venue would not experience overuse resulting in physical deterioration of their facilities.

As shown in Table 2-8, substantial alternative recreational opportunities are available in the area such that much of the open play (besides baseball and soccer) and other recreational activities currently occurring at the Project site could be accommodated during the construction period without resulting in over use of those facilities and related potential for physical deterioration of those facilities. Overall, the short duration of construction for any one proposed Project component could have temporary impacts with respect to field use and recreational resource availability, but would not be expected to result in substantial or accelerated physical deterioration of existing neighborhood or regional recreational facilities.

Following Project construction, the existing recreation opportunities available at Maxwell Farms Regional Park would resume. Due to overall facility improvements the park's capacity to accommodate visitors would be expanded. Available play time would increase at the baseball and soccer fields due to extended hours made possible by new nighttime lighting. As a result, following Project construction, Maxwell Farms Regional Park would be able to accommodate a greater number of practices and games, and other uses, thereby alleviating some of the burden on other recreational facilities in the region, and reducing some of the associated physical deterioration effects at those parks.

While the Master Plan Update elements would facilitate increased use of Maxwell Farms Regional Park, the proposed improvements would be designed to accommodate this level of increased use. For example, the incorporation of synthetic turf would allow for more intensive use of the ball fields without substantially increasing the amount of maintenance that might otherwise be required if the fields were surfaced with non-synthetic turf grass. Similarly, the proposed Project would expand parking and formalize and improve surfacing of paths and trails throughout the park. This would help protect against secondary effects associated with informal parking and trail developments. For these reasons, Project construction and operation would not have a substantial adverse effect related to increased use of existing neighborhood and regional parks or other

recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. The impact would be less than significant.

- b) **Less than Significant with Mitigation.** The Project is a recreational project, the implementation of which could cause adverse physical effects on the environment. The potential adverse physical environmental impacts that could result from proposed Project construction and operation are addressed in the corresponding topical sections of this IS/MND (i.e., biological resources impacts are addressed in Section 2.4, Biological Resources). Specifically, as explained in Sections 2.1, 2.3, 2.4, 2.5, 2.16, and 2.17, impacts of Project implementation would be less than significant with mitigation.

Cumulative Impacts

The geographic scope of potential cumulative, construction-related recreation impacts encompasses the recreational facilities and trails in the vicinity of the Project.

The projects identified on the cumulative projects list in Table 2-1 include various civic facilities and utility projects in the site vicinity. The construction schedule for the Project would begin in 2019 and end in 2022 depending on funding/phasing. Current and ongoing projects and foreseeable future projects relevant to the recreational cumulative analysis include Larson Park Improvements (No. 2), Ernie Smith Community Park Renovation/Bridge Replacement (No. 12), Sonoma Valley Regional Park Expansion Master Plan (No. 13), and Sonoma Valley Trail (No. 14). All four projects are managed by Regional Parks. Similar to the Project, the Larson Park project (No. 2) would update the Master Plan to outline renovations to existing park facilities. The Master Plan is estimated to be updated from 2019-2020, and does not include a construction schedule at this time. The Ernie Smith Community Park project (No. 12) would renovate park facilities, including a pedestrian bridge, playground, and picnic areas, and would replace the field irrigation system and turf on the fields. Construction is estimated from 2020 to 2022. Renovation of recreational facilities at Ernie Smith Community Park could occur simultaneously with renovation of similar facilities at Maxwell Farms, which could limit the ability of parks in the vicinity of the Project to accommodate such recreational activities; however, the short duration of the potential overlap in construction schedules would not be expected to combine to result in substantial or accelerated physical deterioration of existing neighborhood or regional recreational facilities.

Project Nos. 13 and 14 would expand and improve pedestrian and bicyclist pathways and trails within the Regional Parks network. It is unknown whether the new trail systems would overlap with the construction schedule for Project trail improvements; however, these projects would combine in the foreseeable future to create a beneficial impact for park users, including pedestrian and bicyclists, by expanding and improving the Regional Parks' recreational facilities.

The Project's potential cumulative contribution to adverse physical impacts related to other resource topics are addressed in their respective sections of this IS/MND (i.e., Sections 2.1 through 2.18).

References

- City of Sonoma, 2018. Outdoor Activities, Parks, and Sports. Available at <https://www.sonomacity.org/outdoor-activities/>. Accessed on April 19, 2018.
- City of Sonoma, 2017. City Parks Amenities. Available at: https://www.sonomacity.org/documents/city-parks-amenities_1/. Accessed April 19, 2018.
- Sonoma County Agricultural Preservation & Open Space District (Sonoma Open Space), 2018. Montini Open Space Preserve. Available at: <http://www.sonomaopenspace.org/lands/?property=92>. Accessed April 19, 2018.
- Sonoma County Regional Parks (Regional Parks), 2018a. About Us. Available at: <https://parks.sonomacounty.ca.gov/Learn/About-Us/>. Accessed on April 19, 2018.
- Sonoma County Regional Parks (Regional Parks), 2018b. Ernie Smith Community Park. Available at: <https://parks.sonomacounty.ca.gov/Visit/Ernie-Smith-Community-Park/>. Accessed April 19, 2018.
- Sonoma County Regional Parks (Regional Parks), 2018c. Larson Park. Available at: <https://parks.sonomacounty.ca.gov/Visit/Larson-Park/>. Accessed April 19, 2018.
- Sonoma County Regional Parks (Regional Parks), 2018d. Moran Goodman Park. Available at: <https://parks.sonomacounty.ca.gov/Visit/Moran-Goodman-Park/>. Accessed April 19, 2018.
- Sonoma County Regional Parks (Regional Parks), 2018e. Sonoma Valley Regional Park. Available at: <https://parks.sonomacounty.ca.gov/Visit/Sonoma-Valley-Regional-Park/>. Accessed April 19, 2018.
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Transportation and Traffic

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
16. TRANSPORTATION/TRAFFIC — Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

The discussion of potential impacts related to transportation and traffic is based on information provided in the *Maxwell Farms Regional Park Draft Transportation Impact Analysis (TIA) Report* (TJKM, 2018).

- a) **Less than Significant with Mitigation.** Primary access to the Project site is at the park entrance at the intersection of Main Street/Verano Avenue. As part of the Project, the park entrance would be realigned and widened to provide more efficient ingress and egress, and to facilitate proposed parking lot modifications. The widened driveway would expand the exit from its existing one-lane configuration to a two-lane configuration that would include one left-turn lane and one shared through and right-turn lane. Verano Avenue is a two-lane street that runs east-west between 5th Street West and Olive Avenue. Sonoma Highway (State Route [SR] 12) connects Santa Rosa to the Central Valley, and provides regional access to the Project site. SR 12, a Caltrans facility, is located east of the project site and has four lanes with two travel lanes in each direction and with additional capacity at intersections to accommodate high volumes of turning vehicles.

The TIA analyzed operational impacts to traffic in the study area. A summary of the analysis is provided below. A qualitative analysis of potential construction impacts based on the construction details stated above in Chapter 1, *Project Description*, is also provided below.

Project Operations

Existing Conditions

Operations at intersections that the proposed Project might potentially impact during the typical weekday and weekend peak travel periods when traffic volumes on the surrounding streets are highest were evaluated. These time periods are referred to as the weekday p.m. and weekend noon peak hours. Traffic conditions were evaluated based on turning movement counts collected in April and May 2017 at the following two study intersections, both of which are under the County's jurisdiction:

1. SR 12 and Verano Avenue (Signalized)
2. Verano Avenue and Main Street (Two-Way Stop Control)

Based on the level of service (LOS) methodologies for signalized and stop-controlled intersections as adopted by the County, intersection operations were calculated at the study intersections taking into account existing intersection lane geometries, traffic signal timings, and traffic volumes. The Highway Capacity Manual (HCM) intersection delay methodology calculates the delay, expressed in seconds per vehicle, associated with the traffic control at each intersection. LOS ranges from LOS A, meaning free-flow conditions, to LOS F, which indicates extreme congestion and system failure. Both of the study intersections currently operate at LOS C or D or better during both the weekday p.m. and weekend noon peak hours. The County standard for intersections is LOS D or better at build out of the General Plan.

Project Trip Generation, Distribution, and Assignment

The proposed Project trip generation for the weekday p.m. peak hour (between 4:00 and 6:00 p.m.) and weekend noon peak hour (between 11:00 a.m. to 1:00 p.m.) is based on the maximum number of sporting events (e.g., soccer games/practices, baseball games/practices) that would be held during that time period. Although some trips could be made by bicycle or transit, all trips were assumed to be made by vehicle to provide a worst-case assessment of the potential impact to traffic conditions. The trip generation assumptions applied to the proposed Project are based on consultation with Maxwell Farms Regional Park staff and considered the various existing on-site youth sports activities. The methodology includes determining how many teams/players would be on-site at any one time, determining typical vehicle occupancy rates, and calculating the number of vehicles involved. Since the majority of sporting event participants are youths, they are typically driven to the site by others, frequently from out of the area, which results in a high frequency of carpooling.

The proposed Project is estimated to generate a total of approximately 50 net new trips (22 inbound, 28 outbound) during the weekday p.m. peak hour and 254 (148 inbound, 106 outbound) trips during the weekend noon peak hour. These numbers reflect vehicle trips generated by new or expanded Park facilities (i.e., soccer fields, ballfields, tennis courts, pickle ball courts, off-leash dog area, bike park, skate park, Boys & Girls Club, and non-sports park visitors).⁴ It should be noted that the trip generation estimates for the weekday p.m. and weekend noon peak periods are conservative in that they assume every venue within the Master Plan area is fully occupied simultaneously. In addition, it is assumed that all games and sports have a turnover during the single busiest hour, rather than a staggered series of start/finish times. The 100 percent capacity with simultaneous arrivals/departures will rarely occur, so this analysis can be characterized as a worst-case scenario with respect to traffic conditions.

The geographic distribution of trips generated by the proposed Project were developed based on a review of existing traffic data, surrounding land uses, and the local and regional roadway facilities in the vicinity of the project site. The distribution of project trips was assumed as:

30 percent to/from Verano Avenue west of Main Street

10 percent to/from Verano Avenue east of SR 12

35 percent to/from SR 12 south of Verano Avenue

25 percent to/from SR 12 north of Verano Avenue

The traffic generated by the proposed Project was assigned to the street network using the distribution pattern outlined above.

Criteria for Determination of Significant Traffic Impact

The County's Guidelines for Traffic Studies states that a traffic impact would occur if the project's traffic would cause an intersection currently operating at an acceptable level of services (LOS D or better) to operate below the standard (LOS E or F). Furthermore, if the intersection currently operates or is projected to operate below the County standard (LOS E or F), the project's impact is significant and cumulatively considerable if it causes the delay to increase by five seconds or more (average delay for signalized intersections) when comparing baseline and project conditions. Furthermore, an impact would occur if the addition of project traffic causes the 95th percentile queue length to exceed roadway turn lane storage capacity. Therefore, any study intersection exceeding these standards would be considered impacted and subsequently evaluated for mitigation.

Existing with Project

The project traffic estimated and assigned to the study intersections was added to the existing traffic volumes to estimate Existing with Project traffic volumes. The Existing with Project traffic volumes were analyzed to determine the projected intersection delay

⁴ The vehicle trip generation was reduced by 10 percent to account for travel to/from the project site by an alternative travel mode (i.e., walking, bicycle, transit).

and LOS for each of the analyzed intersections under this scenario. Similar to Existing conditions, both of the study intersections are projected to continue to operate at LOS C or D during both the weekday p.m. and weekend noon peak hours, which is above the County's established LOS standard. Therefore, the Project would result in a less-than-significant impact to intersection operations under Existing with Project conditions and no mitigation would be required.

A vehicle queuing and storage analysis was conducted for all exclusive left- and right-turn pockets at the signalized study intersection (SR 12/Verano Avenue) where project traffic would be added under Existing with Project conditions. The project would increase the vehicle queue by a maximum of one vehicle during the weekday p.m. peak hour and four vehicles during the weekend noon peak hour per cycle in the peak 15 minutes. The project would not add any significant queues on the expected left-turn or right-turn queues at the signalized study intersection. Therefore, the impact would be less than significant.

Background Conditions

Background conditions are defined as conditions that would occur within the next eight years (Year 2025). A level of service analysis at the study intersections was conducted for this scenario to establish a base to evaluate the short-term impacts due to the addition of traffic from the proposed Project. Using a growth rate of one percent per year and the existing traffic counts collected in 2017, 2025 Background volumes were projected at both of the study intersections for both the weekday p.m. peak hour and the weekend noon peak hour. Under Background conditions, both intersections are projected to operate at LOS D or better during the both weekday p.m. peak hour and weekend noon peak hour.

Background with Project

The project traffic estimated and assigned to the study intersections was added to the Background conditions traffic volumes to estimate Background with Project traffic volumes. The Background with Project traffic volumes were analyzed to determine the projected intersection delay and LOS for each of the analyzed intersections under this scenario. Similar to Background conditions, both of the study intersections are projected to continue to operate at LOS D or better during both the weekday p.m. and weekend noon peak hours, which is above the County's established LOS standard. Therefore, the Project would result in a less-than-significant impact to intersection operations under Background with Project conditions and no mitigation would be required.

Project Construction

Traffic due to construction would be temporary, substantially less than the amount generated by the Project once constructed and operational, and would vary throughout the phases of construction. Construction staging would occur primarily on site and would not be expected to disrupt access to nearby uses. No major road closures are anticipated. Construction truck traffic would result in short-term increases in traffic volumes and would occur throughout the day. Construction activities, especially those related to the reconstruction of the Project driveway, could disrupt vehicular, bicycle, and pedestrian activity on Verano Avenue. In order to mitigate the potential impact to transportation

users and facilities near the Project site, Regional Parks would develop a Traffic Control Plan (TCP) to reduce potential construction-period impacts to a less-than-significant level (see below). Based on the analysis presented above, implementation of the following mitigation measure would reduce the potential construction-period impact on the performance of the circulation system to a less-than-significant level.

Mitigation Measures

Mitigation Measure TRA-1: Traffic Control Plan.

The County shall require the construction contractor(s) to prepare and implement a traffic control plan (TCP) to reduce traffic impacts on the roadways at and near the work sites, as well as to reduce potential traffic safety hazards and ensure adequate access for emergency responders and construction vehicles, as appropriate. The County and construction contractor(s) shall coordinate development and implementation of this plan with the City of Sonoma and Caltrans, as appropriate. To the extent applicable, the TCP shall conform to the California Manual on Uniform Traffic Control Devices (MUTCD), Part 6 (Temporary Traffic Control) (Caltrans, 2014). The TCP shall include, but not be limited to, the following elements:

- Circulation and detour plans to minimize impacts on local road circulation during road and lane closures. Flaggers and/or signage shall be used to guide vehicles through and/or around the construction zone.
- Identifying truck routes designated by the County. Haul routes that minimize truck traffic on local roadways shall be utilized to the extent possible.
- Sufficient staging areas for trucks accessing construction zones to minimize disruption of access to adjacent public right-of-ways.
- Controlling and monitoring construction vehicle movement through the enforcement of standard construction specifications by on-site inspectors.
- Scheduling truck trips outside the peak morning and evening commute hours to the extent possible.
- Limiting the duration of road and lane closures to the extent possible.
- Construction activities that may encroach on bicycle routes or multi-use paths, advance warning signs (e.g., “Bicyclists Allowed Use of Full Lane” and/or “Share the Road”) shall be posted that indicate the presence of such users.
- Implementing roadside safety protocols. Advance “Road Work Ahead” warning and speed control signs (including those informing drivers of State legislated double fines for speed infractions in a construction zone) shall be posted to reduce speeds and provide safe traffic flow through the work zone.
- Coordinating construction administrators of police and fire stations (including all fire protection agencies), and recreational facility managers. Operators shall be notified in advance of the timing, location, and duration of construction activities and the locations of detours and lane closures, where applicable.
- Repairing and restoring affected roadway rights-of-way to their original condition after construction is completed.

- b) **Less than Significant.** None of the roadway facilities considered in this IS/MND fall within the purview of an adopted congestion management plan or program. Therefore, the County's current intersection operating standard, which is LOS D or better during peak travel periods, applies to this analysis.

Based on analysis provided above in response to question 2.16a, the proposed Project would not result in a substantial increase in traffic during construction activities or project operations and would not cause an exceedance of the County's established LOS standard for intersection operations. Local residents and business owners could potentially notice an increase in neighborhood traffic during the three-year construction period for the three phases; however, any increase in traffic would be temporary and short in duration. The impact would be less than significant.

Project operations would be similar to the existing traffic and circulation conditions within the Project area, consisting of routine maintenance trips, inspection, and vegetation management activities, with little if any increase in operational and/or maintenance traffic on area roads. As such, it is reasonable to conclude that the Proposed Project would not result in an exceedance of the City's and County's established LOS standard for intersection operations. The impact would be less than significant.

- c) **No Impact.** The Project site is located approximately four miles northwest of the Sonoma Skypark Airport and approximately 5.5 miles north of the Sonoma Valley Airport. Both airport facilities are privately-owned and open to the public. The Project would not place any object within the flight path for airplanes in the area. The Project would not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks. There would be no impact.
- d) **Less than Significant.** Sight distance is evaluated to determine if a driver would have adequate visibility to enter a roadway safely without resulting in a conflict with traffic already on the roadway. The Project access points should be free and clear of any obstructions that would materially and adversely affect sight distance, thereby ensuring that exiting vehicles can see pedestrians on the sidewalk and other vehicles traveling on adjacent roadways. Landscaping and parking should not conflict with a driver's ability to locate a gap in traffic and see oncoming pedestrians and bicyclists. Verano Avenue is relatively flat and straight to the east and west, resulting in adequate sight distance. The line of sight between vehicles exiting via the park access road and vehicles travelling eastbound and westbound on Verano Avenue is clear and visible. In addition, the Draft Master Plan (Figure 2) was reviewed for issues related to queuing, safety, and parking spaces that may be difficult to maneuver in and out of the Project site. The circulation aisles are 20 to 25 feet wide and accommodate two-way travel. The majority of the proposed parking spaces are perpendicular. Based on the evaluation, the access driveway is expected to be adequate for passenger vehicles accessing the site and the Project driveways. Therefore, the Project would not substantially increase hazards due to any design features and the impact would be less than significant.

- e) **Less Than Significant.** The Draft Master Plan (Figure 2) was reviewed in order to evaluate the adequacy of maneuvering by emergency vehicles. Overall, the proposed on-site vehicle circulation appears adequate and would comply with standard County requirements regarding emergency access. Neither Project construction nor Project operations would alter the physical configuration of the existing roadway network serving the area, and would have no effect on access to local streets or adjacent uses (including access for emergency vehicles). Local roadways used by emergency access vehicles could be temporarily affected by additional truck traffic while the Project is being constructed; however, this affect would be of limited duration. Therefore, the proposed Project would result in a less-than-significant impact to emergency access.
- f) **Less than Significant.** The intersection of S.R.12 and Verano Avenue has striped crosswalks at all the legs, equipped with countdown pedestrian signal heads. For the intersection of Verano Avenue and Main Street there are marked cross walks on the east leg crossing Verano Avenue and on the north leg crossing Main Street. There are sidewalks present along S.R. 12 and Main Street along both sides. Along Verano Avenue sidewalks are present along both sides east of the Main Street but no sidewalks along both sides, west of Main Street. These sidewalks provide access between the Project site and nearby residential and retail developments.

Sonoma County Transit provides transit service to the Project site. There are four bus stops in the immediate vicinity of the Project site: two located on Verano Avenue and two located on S.R. 12. Three bus routes (Route 30, 32, and 34) serve these four bus stops, providing connections to destinations throughout Sonoma County. The bus stops are accessible to and from the Project site via existing sidewalks and crosswalks along Verano Avenue and S.R. 12.

In terms of bicycle access to the Project site, there are existing Class II Bike lanes along both sides of Verano Avenue and S.R. 12. There are no Class II Bike lanes provided on S.R. 12 between Donald Street and Maxwell Village Shopping Center. In this areas bicyclists share the roadway with vehicles. The Sonoma Bike Path is present on the east side of S.R. 12 within the Project vicinity. Overall, existing bicycle facilities provide adequate connectivity between the Project site and the adjacent neighborhoods.

Implementation of the Project would neither directly nor indirectly eliminate existing or planned alternative transportation corridors or facilities (e.g., bike paths, lanes, bus turnouts, etc.), include changes in policies or programs that support alternative transportation, nor construct facilities in locations in which future alternative transportation facilities are planned. The Project would not conflict with adopted policies, plans and programs supporting alternative transportation. The performance or safety of alternative transportation facilities could be temporarily affected by additional truck traffic while the Project is being constructed; however, this affect would be of limited duration. The impact would be less than significant.

Cumulative Impacts

Cumulative Conditions

Cumulative conditions are defined as conditions that occur within the next 23 years (Year 2040). A level of service analysis at the study intersections was conducted for this scenario to establish a base to evaluate the long-term impacts due to the addition of traffic from the proposed Project. Using a growth rate of one percent per year and the existing traffic counts collected in 2017, 2040 Cumulative volumes were projected at both of the study intersections for both the weekday p.m. peak hour and the weekend noon peak hour. Under Cumulative conditions, the S.R. 12/Verano Avenue intersection is projected to operate at LOS C during both analyzed peak hours; the Verano Avenue/Main Street intersection is also projected to operate at LOS C during the weekend noon peak hour, but is projected to operate at LOS E during the weekday p.m. peak hour, which is below the County's established LOS standard.

Cumulative with Project

The project traffic estimated and assigned to the study intersections was added to the Cumulative conditions traffic volumes to estimate Cumulative with Project traffic volumes. The Cumulative with Project traffic volumes were analyzed to determine the projected intersection delay and LOS for each of the analyzed intersections under this scenario. Unlike Cumulative conditions, both of the study intersections are projected to operate at LOS D or better during both the weekday p.m. and weekend noon peak hours in the Cumulative with Project scenario, which is above the County's established LOS standard. As noted previously, the Project would expand the driveway at the Verano Avenue/Main Street intersection, which would provide additional capacity for vehicles exiting the Project site. The expanded driveway configuration would improve operations at the intersection from LOS E without the Project to LOS D during the weekend noon peak hour. Therefore, the Project would result in a less-than-significant impact to intersection operations under Cumulative with Project conditions and no mitigation would be required.

References

- California Department of Transportation (Caltrans), 2014. California Manual on Uniform Traffic Control Devices (MUTCD), Part 6 (Temporary Traffic Control), 2014.
- TJKM, 2018. *Maxwell Farms Regional Park Draft Transportation Impact Analysis Report*, prepared for Sonoma County Regional Parks. August 29, 2018.
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Tribal Cultural Resources

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
17. Tribal Cultural Resources —				
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Discussion

- a, b) **Less than Significant with Mitigation.** A tribal cultural resource is defined as a site feature, place, cultural landscape, sacred place or object, which is of cultural value to a tribe and that is either in or eligible for listing in the California Register of Historical Resources (California Register) or a local historic register, or the lead agency, at its discretion, chooses to treat the resource as a tribal cultural resource. Impacts on tribal cultural resources are assessed in consultation with culturally-affiliated Native American tribes that have requested consultation in accordance with PRC Section 21080.3. This analysis considers whether the Project would cause a substantial adverse change in the significance of a tribal cultural resource, including archaeological resources and human remains.

As described in Section 2.5, Cultural Resources, there is an archaeological resource (CA-SON-1069) in the Project site. When the site was recorded in 1977, archaeologists recommended that it become eligible for listing in the National Register of Historic Places as important for understanding the prehistory of the area (Stillinger and Fredrickson, 1977).

Based on the known site constituents, archaeological site CA-SON-1069 is recommended eligible for listing in the California Register of Historical Resources (California Register) under criterion A (for its association with the lifeways of Native Americans in the Sonoma County area) and criterion D (for the ability to yield information important to prehistory). Because the archaeological site is eligible for listing in the California Register, it is considered a historical resource for the purposes of CEQA.

The Federated Indians of Graton Rancheria (FIGR) is the federally-recognized tribe with ethnographic affiliation to Marin and Sonoma counties, including the area of Maxwell Farms Regional Park. The FIGR, in consultation with Sonoma County Regional Parks,

has determined that archaeological site CA-SON-1069 is a tribal cultural resource for the purposes of CEQA. PRC Section 21084.3 states that agencies shall, when feasible, avoid damaging effects to any tribal cultural resource and institute mitigation measures that would avoid or minimize significant adverse impacts, including preservation in place and treating the resource with culturally appropriate dignity.

Impacts to a tribal cultural resource would be potentially significant. **Mitigation Measure CUL-1a** (see Section 2.5, Cultural Resources) would reduce impacts to archaeological site CA-SON-1069 to a less-than-significant level by requiring an Archaeological Resources Management Plan be developed to establish management guidelines for protecting the resource from long-term impacts.

In addition, while no other tribal cultural resources have been identified in the remaining areas of the Project site, there is the potential that archaeological resources could be identified during ground disturbing activities and that those resources may also be considered tribal cultural resources. Impacts to previously unidentified tribal cultural resources would be potentially significant. This impact would be reduced to a less-than-significant level by implementation of **Mitigation Measure CUL-1b** (see Section 2.5, Cultural Resources), which would require preconstruction training and that work halt in the vicinity of a find until a qualified archaeologist can make an assessment and provide further recommendations for avoidance or testing.

Cumulative Impacts

With mitigation, the Project would not contribute to significant tribal cultural resource impacts. The geographic scope of analysis for cumulative impacts on tribal cultural resources encompasses areas where development would occur in the vicinity of the Project site. This area was selected because of the similar themes of its Native American use, as well as prehistoric and ethnohistoric use and associated cultural resources.

A cumulatively significant impact would result if incremental effects of the Project, after implementation of mitigation, combined with the impacts of one or more cumulative projects, after implementation of their mitigation, were to cause a substantial adverse effect on the same tribal cultural resource.

There is one archaeological resource in the Project site that is considered a tribal cultural resource. As discussed above, the Project would avoid this resource through preservation in place in accordance with the provisions of CEQA Guidelines Section 15126.4(b)(3), including decommissioning existing trails, re-locating existing trails, installation of physical barriers, and capping with fill placement where necessary. The Project would have the potential to affect unknown archaeological resources that could be considered tribal cultural resources. However, there would not be the potential for the Project and cumulative projects to affect the same undiscovered tribal cultural resources.

Federal, state, and local laws can generally protect tribal cultural resources in most instances. Development in the geographic scope would be required to comply with the same provisions of

CEQA and implement measures similar to those identified above (i.e., Mitigation Measure CUL-1b). This measure would require preconstruction training and protocols for responding in the event of inadvertent discoveries.

Through compliance with applicable regulations and implementation of associated avoidance and minimization measures, the Project would not have a considerable contribution to adverse effects on tribal cultural resources of the region. This cumulative impact would be less than significant.

References

Stillinger, R. and D.A. Fredrickson, *An Archaeological Reconnaissance of the Maxwell Estate, Sonoma County, California*. On file (S-695), NWIC, 1977.

Utilities and Service Systems

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
18. UTILITIES AND SERVICE SYSTEMS — Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

- a, b, e) **Less than Significant.** The Project area is served by the Sonoma Valley County Sanitation District (SVCSD). The SVCSD treatment plant is designed to treat an average of 3 million gallons per day (mgd) of dry-weather flows, and has the added capacity to treat average wintertime flows of 11 mgd, and an average winter flow peak of 22 mgd. The 4,500-acre service area includes approximately 17,027 equivalent single-family homes (SVCSC, n.d.). Wastewater associated with the Project would be generated from three restrooms (with at least two stalls each) and two concession areas. Given modest increase in overall visitation, and that the proposed facilities would supplement existing restroom facilities onsite, the Project would not generate a substantial amount of new demand for wastewater services. Given that the Project's net increase in demand from wastewater services resulting from the increased visitation would be nominal relative to the plant's treatment capacity, the Project would not impede the SVCSD's ability to meet its treatment requirements. Therefore, the Project would not cause an exceedance in wastewater treatment requirement, would not cause the construction or expansion of wastewater treatment facilities, and would not result in a determination by the wastewater treatment provider that it has inadequate capacity to serve the Project.

- c) **Less than Significant.** Stormwater flows associated with the Project would be generated from impervious surfaces, which would increase under the Project compared to existing conditions; however, implementation of the Project would include the construction of bioswales for onsite remediation of stormwater flows generated by the updated parking lot, and would otherwise be required to comply with the stormwater control requirements of the County's NPDES Municipal Separate Storm Sewer System (MS4) drainage control permit requirements. Stormwater is discussed in more detail in Section 2.9, Hydrology and Water Quality. Overall, the Project would not require the construction of new stormwater drainage facilities, the construction of which could cause significant adverse effects. The impact would be less than significant.
- d) **Less than Significant.** The Sonoma County Water Agency (SCWA) provides drinking water to over 600,000 people in Sonoma and Marin Counties, mainly via the Russian River and two reservoirs – Lake Mendocino and Lake Sonoma (SCWA, 2016). The Project would include three new restrooms, two new concession facilities, and a new irrigation system in the upper terraces of the site, all of which would require water supplies. However, given the nominal net increase in demand that would result from the anticipated change in visitation, coupled with the reduction in the amount of water required for ballfield irrigation when replaced with synthetic turf, the Project would not have a substantial adverse effect on water demand. For these reasons, the Project would have sufficient water supplies available and no new or expanded entitlements would be required. The impact would be less than significant.
- f, g) **Less than Significant.** Construction and operational waste generated by the Project would be expected to be disposed at the Redwood Landfill in Novato, CA. The Redwood Landfill is permitted to accept 2,300 tons per day and has a maximum permitted capacity of 19 million cubic yards (CalRecycle, 2018a). The Project would generate approximately 5,800 cubic yards (approximately 8,000 tons) of demolition waste, which would be distributed among three implementation phases over a 34-month period. Any excavated dirt would be used on-site for fill or landscape contouring, and would not be expected to be off-hauled. The Redwood Landfill would have sufficient permitted capacity to serve the Project's construction solid waste disposal needs.

Operational waste would be a combination of recyclable materials and landfill waste. As discussed in Chapter 1, Project Description, proposed improvements to the park could result in a net increase in visitation of up to 100 people during a peak visitation event. However, as also noted, actual overall visitation would likely be lower. And the corresponding overall increase in waste generation, while greater than under existing conditions, would not be substantially different, and the Redwood Landfill would have sufficient permitted capacity to serve the Project's operational solid waste needs.

Effective January 1, 2017, the California Green Building Standards Code (CALGreen) (Title 24, part 11) requires that 65 percent of construction waste materials generated during construction projects be diverted from landfill (CalRecycle, 2018b). In addition, AB 341, California's Mandatory Commercial Recycling Law, requires any businesses

and public entities (including regional agencies) that generate 4 cubic yards or more of commercial solid waste per week to recycle in order to comply with the law's 50 percent solid waste diversion requirement (SCWMA, 2018). Recycle bins are currently located throughout the park, and the use of recycle bins would continue with the Project. Regional Parks would comply with AB341 and CALGreen, and the Project would comply with state regulations related to solid waste. For these reasons, the Project would have a less-than-significant impact related to landfill capacity and compliance with applicable waste reduction regulations.

Cumulative Impacts

The cumulative projects listed in Table 2-1 could combine to cause temporary and/or permanent impacts to utilities and service systems, the expansion or creation of which could cause environmental effects. However, for the reasons presented above, the slight impacts to utilities and service systems caused by Project construction and operation would not be substantial enough to cause significant impacts when combined with cumulative projects. Therefore, the Project would have a less-than-significant contribution to a cumulative effect related to utilities and service systems.

References

- CalRecycle, 2018a. Facility/Site Summary Details: Redwood Landfill (21-AA-0001). Available at: <http://www.calrecycle.ca.gov/SWFacilities/Directory/21-AA-0001/>. Accessed on April 16, 2018.
- CalRecycle, 2018b. Local Government Construction and Demolition (C&D) Guide, Frequently Asked Questions. Available at: <http://www.calrecycle.ca.gov/LGCentral/Library/CandDModel/Instruction/FAQ.htm#dates> Accessed on April 16, 2018.
- Sonoma County Waste Management Agency (SCWMA), 2018. Mandatory Commercial Recycling. Available at: <http://recyclenow.org/business/commercial.asp>. Accessed on April 16, 2018.
- Sonoma County Water Agency (SWCA), 2016. Sonoma County Water Agency: Supply Availability for Urban Water Suppliers. Available at: <http://www.scwa.ca.gov/files/docs/water-supply/Self%20Certification%20Wholesaler%20FINAL.pdf>. Accessed on April 16, 2018.
- Sonoma Valley County Sanitation District (SVCSD), n.d. Brochure. Available at: http://www.scwa.ca.gov/files/docs/sanitation/SVCSD_brochure.pdf. Accessed on April 16, 2018.
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Mandatory Findings of Significance

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
19. MANDATORY FINDINGS OF SIGNIFICANCE —				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Discussion

- a) **Less than Significant with Mitigation.** As discussed in Section 2.4, Biological Resources, the Project could have potentially significant impacts related to biological resources (sensitive natural communities, special-status plant species, birds, fish, and amphibians). With implementation of mitigation (using Mitigation Measures BIO-1 through BIO-10), the potential for such impacts would be reduced to a less-than-significant level, and the Project would not have residual effects that would degrade environmental quality, or substantially reduce the habitat or affect populations of any wildlife, fish, or plant species. As discussed in Sections 2.5, Cultural Resources, and 2.17, Tribal Cultural Resources, the Project could have potentially significant impacts related to known archaeological resources, as well as to previously undiscovered cultural resources, including human remains. With implementation of mitigation (using Mitigation Measures CUL-1 through CUL-3), the potential for such impacts would be reduced to a less-than-significant level, and the Project would not have residual effects that would eliminate examples of the major periods of California history or prehistory. Discussed in Section 2.9, Hydrology and Water Quality, the selection of certain turf products containing recycled tire crumb rubber fill could pose adverse water quality impacts. With implementation of mitigation (HYD-1) the potential for such effects would be reduced to less-than-significant levels.
- b) **Less than Significant.** The analysis of cumulative effects is addressed in prior sections of this document. Section 2.2, Evaluation of Environmental Effects presents the approach to cumulative impacts analysis and includes a list (Table 2-1) of past, present, and reasonably foreseeable future Projects whose impacts could combine with those of the

Project to result in a cumulative environmental effect. Discussions of cumulative effects that could result from Project implementation are discussed by environmental topic, in the respective topical sections of this document. For example, the Project's potential cumulative biological resources impacts are addressed in Section 2.4, Biological Resources. Overall, the analysis concludes that, after mitigation for project-specific effects, when considering the location, timing, and extent of residual Project effects, in combination with those of cumulative projects, the proposed Project's cumulative contribution would range from none to less than significant, depending upon the topic.

- c) **Less than Significant with Mitigation.** The analysis of the Project's potential for effects on human beings is presented in Section 2.3, Air Quality; Section 2.6, Geology and Soils; Section 2.7, Greenhouse Gas Emissions; Section 2.8, Hazards and Hazardous Materials; Section 2.9, Hydrology and Water Quality; Section T2, Noise and Vibration; and Section 2.16, Transportation. As discussed in those sections, with the exception of potential air quality and hazardous materials impacts, the Project would not pose risk of substantial adverse human health effects. As discussed in Section 2.3, the Project's construction emissions could contribute to an existing air quality violation and result in a net increase in a criteria air pollutant for which the Project region is non-attainment. With implementation of mitigation (using Mitigation Measure AQ-1), the potential for such impacts would be reduced to a less-than-significant level. Discussed in Section 2.8, Hazards and Hazardous Materials, the selection of certain turf products containing recycled tire crumb rubber fill could pose adverse human health impacts. With implementation of mitigation (HAZ-1) the potential for such effects would be reduced to less-than-significant levels. Through implementation of these measures, the Project would not have residual effects that would result in a substantial adverse effect on human beings.

CHAPTER 3

Summary of Mitigation Measures

**TABLE 3-1
SUMMARY OF MITIGATION MEASURES**

Mitigation No.	Mitigation Measure	Monitoring and Reporting Actions	Implementation Responsibility	Enforcement Responsibility	Mitigation Timing
Air Quality					
AQ-1	<p>Mitigation Measure AQ-1: Implement BAAQMD Basic Construction Mitigation Measures.</p> <p>The following applicable Bay Area Air Quality Management District's (BAAQMD) Basic Construction Mitigation Measures, Regional Parks or its construction contractor shall implement the following measures to reduce emissions of fugitive dust and equipment exhaust:</p> <ul style="list-style-type: none"> • All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day. • All haul trucks transporting soil, sand, or other loose material off-site shall be covered. • All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. • All vehicle speeds on unpaved roads shall be limited to 15 mph. • All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used. • Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points. • All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked prior to the start of construction by a certified visible emissions evaluator. • Post a publicly visible sign with the telephone number and person to contact at Regional Parks regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations. 	<ol style="list-style-type: none"> 1. Comply with Basic Construction Air Quality Mitigation Measures in conformance with BAAQMD regulations to control fugitive dust and equipment exhaust during construction 2. Post a publicly visible sign with the telephone number and person to contact at the EBRPD regarding dust complaints 	<ol style="list-style-type: none"> 1. Construction Contractor 2. Construction Contractor 	<ol style="list-style-type: none"> 1. Regional Parks 2. Regional Parks 	<ol style="list-style-type: none"> 1. During construction 2. During construction

TABLE 3-1 (CONTINUED)
SUMMARY OF MITIGATION MEASURES

Mitigation No.	Mitigation Measure	Monitoring and Reporting Actions	Implementation Responsibility	Enforcement Responsibility	Mitigation Timing
Biological Resources					
BIO-1	<p>Mitigation Measure BIO-1: Seasonal Work Window. <i>Mitigation measure BIO-1 applies only to construction of enhanced creek access points (No. 31), the improved pathway from Verano bridge into the park (No. 32), and restoration of the riparian zone (No. 33).</i></p> <p>Activities within the Sonoma Creek riparian corridor with the potential to result in short-term impacts to sensitive aquatic species, including all activities within the top-of-bank of Sonoma Creek, shall be conducted within seasonal work windows identified to reduce potential impacts on salmonids (i.e., work shall be conducted from June 15 through October 15) to the extent practicable with the exception of revegetation, which may occur year-round.</p>	1. Comply with seasonal work windows of June 15-October 15	1. Construction Contractor	1. Regional Parks	1. During construction
BIO-2	<p>Mitigation Measure BIO-2: Protection of Rare Plants. <i>Mitigation measure BIO-2 applies only to construction of enhanced creek access points (No. 31), the improved pathway from Verano bridge into the park (No. 32), and restoration of the riparian zone (No. 33).</i></p> <p>A qualified biologist shall conduct a pre-construction survey for special-status plant species with the potential to occur within the area of disturbance. The survey shall follow the procedures outlined in the California Division of Fish and Wildlife (CDFW) (2018) rare plant survey protocol.</p> <p>If special-status plant species are found, Regional Parks shall attempt to avoid the plant population through project design modifications (e.g., trail relocation). If avoidance is not possible, Regional Parks shall coordinate with qualified botanist to identify and implement, or supervise the implementation of, preservation and avoidance measures commensurate with the standards provided in applicable CDFW protocols for the affected species, including revegetation, as deemed appropriate by the qualified botanist. The preservation and avoidance measures shall include, at a minimum, appropriate buffer areas clearly marked during project activities (e.g., greater than 20 feet), monitoring by a qualified plant biologist.</p>	1. Conduct pre-construction surveys for special-status plant species	1. Regional Parks/Qualified Biologist	1. Regional Parks	1. Prior to construction

TABLE 3-1 (CONTINUED)
SUMMARY OF MITIGATION MEASURES

Mitigation No.	Mitigation Measure	Monitoring and Reporting Actions	Implementation Responsibility	Enforcement Responsibility	Mitigation Timing
Biological Resources (continued)					
BIO-3	<p>Mitigation Measure BIO-3: Contractor Environmental Awareness Training and Site Protection.</p> <p><i>Mitigation measure BIO-3 applies only to construction of enhanced creek access points (No. 31), the improved pathway from Verano bridge into the park (No. 32), and restoration of the riparian zone (No. 33).</i></p> <p>All construction personnel working in undeveloped portions of the Project area shall attend an environmental education program delivered by a qualified biologist. The training shall include an explanation as how to best avoid the accidental take of California freshwater shrimp, western pond turtle, nesting birds and bats. The training session shall be mandatory for contractors and all construction personnel. The field meeting shall include topics on species identification, descriptions, habitat requirements and required minimization and avoidance measures.</p> <p>The contractor shall provide closed garbage containers for the disposal of all trash items. Work sites shall be cleaned of litter daily. No pets, excluding service animals, shall be allowed in construction areas. Nighttime lighting, if used, shall be minimized and directed downward. Construction hours within wooded areas and in riparian (streamside) habitat shall be limited to 8:00 a.m. to 5:00 p.m.</p>	1. Conduct environmental education training for construction personnel	1. Regional Parks/Qualified Biologist	1. Regional Parks/Construction Contractor	1. Prior to construction
BIO-4	<p>Mitigation Measure BIO-4: Protection of Special-Status Species.</p> <p><i>Mitigation measure BIO-4 applies only to construction of enhanced creek access points (No. 31), the improved pathway from Verano bridge into the park (No. 32), and restoration of the riparian zone (No. 33).</i></p> <p>Terrestrial species. Prior to commencing work, a qualified biologist shall survey the active construction footprint for western pond turtle, nesting birds, special-status bats, and other special-status species with potential to be present. Prior to clearing and grubbing activities within 150 feet of aquatic habitat, including grading, excavation, and vegetation-removal activities, a qualified biologist shall conduct a daily morning spot-check survey to identify the presence of special-status species in the area where ground disturbance or vegetation removal shall occur.</p>	<p>1. Conduct special-status species surveys for western pond turtle, nesting birds, bats and other special-status species.</p> <p>2. Conduct daily morning spot-check survey for presence of special-status species during ground disturbance.</p>	<p>1. Qualified Biologist</p> <p>2. Qualified Biologist</p>	<p>1. Regional Parks/Construction Contractor</p> <p>2. Regional Parks/Construction Contractor</p>	<p>1. Prior to construction</p> <p>2. During ground disturbance</p>

TABLE 3-1 (CONTINUED)
SUMMARY OF MITIGATION MEASURES

Mitigation No.	Mitigation Measure	Monitoring and Reporting Actions	Implementation Responsibility	Enforcement Responsibility	Mitigation Timing
Biological Resources (continued)					
BIO-4 (cont.)	<p>All excavated or deep-walled holes or trenches greater than one-foot deep shall be covered at the end of each workday using plywood, steel plates, or similar materials, or escape ramps shall be constructed to allow animals to exit. Before such holes are filled, they shall be thoroughly inspected for trapped animals.</p> <p>If a western pond turtle is identified within the work area during construction, the monitoring biologist shall be notified, work shall cease in the vicinity of the animal, and the animal shall be allowed to relocate of its own volition.</p>				
BIO-5	<p>Mitigation Measure BIO-5: Protection of Nesting Birds and Roosting Bats.</p> <p><i>Mitigation Measure BIO-5 applies to all Project components.</i></p> <p>Bird Protection. Tree removal and trimming activities shall occur outside of the nesting season (February 1 to August 31), to the extent feasible. If removal of scrub and riparian vegetation and trimming of trees during bird nesting season cannot be fully avoided, a qualified wildlife biologist shall conduct pre-construction nesting surveys within 7 days prior to the start of such activities or after any construction breaks of 14 days or more. Prior to any tree removal or construction in nesting season, a qualified biologist shall conduct a nesting bird survey within 250 feet of any construction site. Nesting birds with active nests in the vicinity of the construction area shall be avoided by a minimum buffer of 100 feet, or as determined by the qualified biologist in coordination with CDFW. Construction work may continue outside of the no-work buffer.</p> <p>Bat Protection. A pre-construction survey for special-status bats shall be conducted by a qualified wildlife biologist in advance of tree trimming, topping or removal, to characterize potential bat habitat and identify active roost sites. Should potential roosting habitat or active bat roosts be found in trees, the following measures shall be implemented:</p> <ol style="list-style-type: none"> Trimming, topping or removal of trees, shall occur when bats are active, approximately between the periods of March 1 to April 15 and August 15 to October 15; outside of bat maternity roosting season (approximately April 15 to August 15) and outside of months of winter torpor (approximately October 15 to February 28), to the extent feasible. 	<ol style="list-style-type: none"> Tree removal and trimming activities shall occur outside of the nesting season (February 1 to August 31), to the extent feasible. Conduct pre-construction nesting surveys within 7 days prior to construction start or after construction breaks of 14 days or more. Limit tree trimming/removal during bat maternity roosting season Biologist onsite during tree removal/trimming if bat roosting habitat or active non-maternity or hibernation bat roosts are present 	<ol style="list-style-type: none"> Construction Contractor Qualified Biologist Construction contractor Qualified Biologist 	<ol style="list-style-type: none"> Regional Parks Regional Parks Regional Parks Regional Parks 	<ol style="list-style-type: none"> Prior to and during construction Prior to construction During construction During construction

TABLE 3-1 (CONTINUED)
SUMMARY OF MITIGATION MEASURES

Mitigation No.	Mitigation Measure	Monitoring and Reporting Actions	Implementation Responsibility	Enforcement Responsibility	Mitigation Timing
Biological Resources (continued)					
BIO-5 (cont.)	<p>2. If trimming, topping, or removal of trees during the periods when bats are active is not feasible and bat roosts being used for maternity or hibernation purposes are found on or in the immediate vicinity of the Project site where these activities are planned, a no-disturbance buffer of 100 feet shall be established around these roost sites until they are determined inactive by a qualified wildlife biologist. A 100-foot no disturbance buffer is a typical protective buffer distance; however, it may be modified by the qualified wildlife biologist depending on existing screening around the roost site (such as dense vegetation or a large rock formation), as well as the type of construction activity which would occur around the roost site.</p> <p>3. The qualified wildlife biologist shall be present during tree trimming if bat roosting habitat or active non-maternity or hibernation bat roosts are present (e.g., daytime bachelor roosts). Trees with roosts shall be disturbed only when no rain is occurring or is forecast to occur for three (3) days and when daytime temperatures are at least 50 degrees Fahrenheit (°F). Trimming, topping or removal of trees, containing or suspected to contain non-maternity or hibernation bat roost sites shall be done under supervision of the qualified biologist and follow a two-step removal process:</p> <p>a. On the first day of tree trimming, topping or removal and under supervision of the qualified wildlife biologist, branches and limbs not containing cavities or fissures in which bats could roost, shall be cut only using chainsaws.</p> <p>b. On the following day and under the supervision of the qualified wildlife biologist, the remainder of the tree or structure may be removed, either using chainsaws or other equipment (e.g., excavator or backhoe).</p>				

TABLE 3-1 (CONTINUED)
SUMMARY OF MITIGATION MEASURES

Mitigation No.	Mitigation Measure	Monitoring and Reporting Actions	Implementation Responsibility	Enforcement Responsibility	Mitigation Timing
Biological Resources (continued)					
BIO-6	<p>Mitigation Measure BIO-6: Protection for Sensitive Natural Communities.</p> <p>The area of impact in sensitive natural communities shall be minimized by siting construction staging and access areas outside sensitive natural communities and by utilizing previously-disturbed areas in upland habitat for staging. Staging within seasonal wetland and riparian habitats shall be avoided. No construction activities, parking, or staging shall occur outside of designated areas.</p> <p>During construction, as much native understory vegetation and as many trees as possible will be retained. All trees to remain during construction within the grading area will be flagged for avoidance, and trimmed if necessary to ensure their trunks and/or limbs to not get disturbed during construction. Certified weed-free permanent and temporary erosion control measures shall be implemented to minimize erosion and sedimentation during and after construction.</p> <p>Temporary impacts on sensitive natural communities shall be restored by revegetation with native species. Revegetated areas shall be monitored for a five-year period to ensure success, according to the Habitat Restoration and Monitoring Plan described in Mitigation Measure BIO-7.</p>	<ol style="list-style-type: none"> 1. Site and stage construction and access areas outside sensitive natural communities 2. Flag trees and native understory vegetation for avoidance 3. Monitor revegetated areas for 5 years 	<ol style="list-style-type: none"> 1. Construction Contractor 2. Biologist 3. Biologist/Regional Parks 	<ol style="list-style-type: none"> 1. Regional Parks 2. Regional Parks 3. Regional Parks 	<ol style="list-style-type: none"> 1. Prior to construction 2. Prior/During construction 3. Post construction
BIO-7	<p>Mitigation Measure BIO-7: Habitat Restoration and Monitoring Plan.</p> <p><i>Mitigation Measure BIO-7 applies to construction of enhanced creek access points (No. 31), the improved pathway from Verano bridge into the park (No. 32), restoration of the riparian zone (No. 33), and all non-paved trail improvement and stabilization work.</i></p> <p>If sensitive vegetation communities are removed during the Project, Regional Parks shall prepare a Habitat Restoration and Monitoring Plan for restoration of sensitive vegetation following construction activities. This plan shall include protocols for replanting of vegetation removed prior to or during construction, and management and monitoring of the plants to ensure replanting success. Areas impacted from construction-related activity shall be replanted or reseeded with native trees, shrubs, wetland vegetation, and herbaceous species under guidance from a qualified biologist.</p>	<ol style="list-style-type: none"> 1. Prepare Habitat Restoration and Monitoring Plan 2. Implement Plan and Monitor for 5 years 	<ol style="list-style-type: none"> 1. Qualified Biologist 2. Qualified Biologist/construction contractor 	<ol style="list-style-type: none"> 1. Regional Parks 2. Regional Parks 	<ol style="list-style-type: none"> 1. During construction 2. During and Post-construction

TABLE 3-1 (CONTINUED)
SUMMARY OF MITIGATION MEASURES

Mitigation No.	Mitigation Measure	Monitoring and Reporting Actions	Implementation Responsibility	Enforcement Responsibility	Mitigation Timing
Biological Resources (continued)					
BIO-7 (cont.)	<p>To the extent feasible, local plant materials shall be used for revegetation of the disturbed area. This will ensure that the seeds can be collected during the appropriate season and the container plants will be of an appropriate size for out-planting. The monitoring plan shall include annual monitoring for 5 years. The plan shall contain protocols for vegetation management, protocols for monitoring replanting success, and specify thresholds for and descriptions of adaptive management measures to be implemented if success criteria are not being met. The adaptive management measures may include weed control or additional replanting, among other strategies.</p> <p>The Habitat Restoration and Monitoring Plan shall also address restoration of jurisdictional wetlands and waters. Temporary impacts to wetlands shall be restored onsite with native wetland species under guidance from a qualified biologist. Any permanent impacts to jurisdictional wetlands shall be mitigated by replacement on- or off-site at a 1:1 ratio or as otherwise required by a regulatory agency with jurisdiction.</p> <p>The Habitat Restoration and Monitoring Plan shall at a minimum:</p> <ul style="list-style-type: none"> • Include photo points to document pre-project wetland, riparian, and/or stream conditions (as appropriate to impacted habitats) in the work area and to gauge restoration success over time. • Identify the native plants to be used for restoration and the replacement ratio, establish success criteria and a monitoring schedule, and develop a contingency plan if restoration goals are not met within three years. • Identify temporarily impacted areas are returned to pre-project conditions or greater. • Ensure that no significant undercutting, scour or erosion is present within, upstream, or downstream of the work area at Sonoma Creek. • Ensure that replacement plantings, if used, have a minimum 70% survival rate. • Provide that the project site is not dominated by invasive vegetation. 				

TABLE 3-1 (CONTINUED)
SUMMARY OF MITIGATION MEASURES

Mitigation No.	Mitigation Measure	Monitoring and Reporting Actions	Implementation Responsibility	Enforcement Responsibility	Mitigation Timing
Biological Resources (continued)					
BIO-8	<p>Mitigation Measure BIO-8: Avoid Spread of Invasive Species and Pathogens.</p> <p><i>Mitigation Measure BIO-8 applies to construction of enhanced creek access points (No. 31), the improved pathway from Verano bridge into the park (No. 32), restoration of the riparian zone (No. 33), and all non-paved trail improvement and stabilization work.</i></p> <ul style="list-style-type: none"> All vehicles and equipment entering each Project site shall be clean of noxious weeds and pathogens to minimize their spread within the site and from outside the Project site. All construction equipment shall be washed thoroughly to remove all dirt, plant, and other foreign material prior to entering the Project sites. Equipment found operating on the Project that has not been properly washed prior to site entry shall be shut down and removed from the site. If potted plants are needed for site restoration, nursery operations where plants are stored, propagated, or purchased must certify implementation of best management practices to reduce pest and pathogen contamination within their nursery. Disturbed and decompacted areas beyond the footprints of the proposed improvements and restoration areas shall be revegetated with locally native vegetation. Revegetated areas shall be protected and tended, including watering when needed. 	<ol style="list-style-type: none"> Maintain vehicles and equipment to be free of noxious weeds and pathogens Use plants that certify implementation of bmps to reduce pest and pathogen contamination within their nursery Revegetate with locally native vegetation 	<ol style="list-style-type: none"> Construction Contractor Construction Contractor Construction Contractor 	<ol style="list-style-type: none"> Regional Parks Regional Parks Regional Parks 	<ol style="list-style-type: none"> During construction During construction During construction
BIO-9	<p>Mitigation Measure BIO-9: Wetland Delineation, Mitigation and Monitoring.</p> <p><i>Mitigation Measure BIO-9 applies to enhanced creek access points (No. 31), the improved pathway from Verano bridge into the park (No. 32), restoration of the riparian zone (No. 33), and all non-paved trail improvement and stabilization work.</i></p> <p>Following the habitat assessment survey required under Mitigation Measure BIO-6, if wetland impacts are anticipated and cannot be avoided, Regional Parks shall conduct a formal wetland delineation according to the USACE protocol and regional supplement to delineate all potentially jurisdictional wetlands and other waters in the Project area. Following the identification of jurisdictional areas, if the Project can be</p>	<ol style="list-style-type: none"> Conduct formal wetland delineation Determine if permits or other authorizations are required. 	<ol style="list-style-type: none"> Regional Parks/Qualified Biologist Regional parks 	<ol style="list-style-type: none"> Regional Parks Regional Parks 	<ol style="list-style-type: none"> Prior to construction Prior to construction

TABLE 3-1 (CONTINUED)
SUMMARY OF MITIGATION MEASURES

Mitigation No.	Mitigation Measure	Monitoring and Reporting Actions	Implementation Responsibility	Enforcement Responsibility	Mitigation Timing
Biological Resources (continued)					
BIO-9 (cont.)	modified to avoid potential wetland features, then no further action is needed to mitigate for wetland impacts. If jurisdictional areas cannot be avoided, then Regional Parks shall consult with the appropriate regulatory agencies with jurisdiction (i.e., USACE, CDFW, RWQCB) to determine whether permits or other authorizations would be required. Regional Parks shall proceed in accordance with the determinations of the agencies with jurisdiction, including by applying for and obtaining any necessary approvals prior to project implementation. If deemed necessary for Project implementation, the subject permits/authorizations would specify the amount of wetland to be impacted and include conditions for construction, restoration, and mitigation. Wetlands impacted by the Project shall be mitigated at a ratio of not less than 1:1. Any required restoration shall be provided through the Habitat Restoration and Monitoring Plan described in Mitigation Measure BIO-7.				
BIO-10	<p>Mitigation Measure BIO-10: Secure Permits for Tree Removal.</p> <p><i>Mitigation Measure BIO-10 applies to any tree removal that could occur as a result of construction during all phases.</i></p> <p>Prior to start of construction, Regional Parks shall determine whether any heritage or valley oak trees would require removal. If any such tree would require removal, Regional Parks shall adhere to the requirements of the Sonoma County Tree Protection Ordinance (Section 26-88-010(m)) (http://sonomacounty-ca.elaws.us/code/coor_ch26_art88_sec26-88-010), including by implementing replacement plantings in accordance with the standards set forth therein. Protocols for the installation, monitoring, and successful establishment of replacement plantings shall be specified in Habitat Restoration and Monitoring Plan described in Mitigation Measure BIO-7. Where it is infeasible to replant in place, Regional Parks may replant off-site or make in-lieu payment fees in accordance with the terms of the ordinance.</p>	<ol style="list-style-type: none"> 1. Determine whether any heritage or valley oak trees would require removal. 2. Replant or make in-lieu payment fees 	<ol style="list-style-type: none"> 1. Regional Parks/Qualified Botanist 2. Regional Parks 	<ol style="list-style-type: none"> 1. Regional Parks 2. Regional Parks 	<ol style="list-style-type: none"> 1. Prior to construction 2. Prior to construction

TABLE 3-1 (CONTINUED)
SUMMARY OF MITIGATION MEASURES

Mitigation No.	Mitigation Measure	Monitoring and Reporting Actions	Implementation Responsibility	Enforcement Responsibility	Mitigation Timing
Cultural Resources					
CUL-1a	<p>Archaeological Resources Management Plan</p> <p>Prior to any ground disturbing activities in the vicinity of archaeological site CA-SON-1069, Sonoma County Regional Parks will retain the services of a qualified archaeologist with expertise in California archaeology to develop an Archaeological Resources Management Plan (ARMP). The ARMP will be completed in consultation with and subject to approval by the Federated Indians of Graton Rancheria. The ARMP will include detailed guidelines for decommissioning existing trail segments, through the use of physical barriers (i.e., split rail fencing, and/or log barriers) and re-vegetation, raising other segments of the trail to cover or otherwise stabilize areas of the archaeological site where necessary, and establishing management guidelines for protecting the archaeological site from long-term impacts. The ARMP will include, but not be limited to, the following components:</p> <ul style="list-style-type: none"> • Mapping of the site boundaries in relation to a reference system to confirm the extent so that the site can be relocated in the future and trails can be decommissioned, re-located, fenced, covered or otherwise stabilized. • Where covering or capping is deemed necessary, provisions for geotextile fabric to be placed on top of the site, followed by the capping fill material to distinguish between the two materials. Fill material shall be placed to a 1.5-foot minimum depth of cover. • A qualified archaeologist will work with project engineers to design the cap to minimize erosion. • All covering and stabilization work to preserve the site shall be monitored by a qualified archaeologist and a culturally-affiliated Native American representative. • No ground disturbance within 250 feet of the site will be implemented until treatment measures are designed and agreed upon. • Provisions to stabilize segments of the two main trails (Verano Trail, and Three Meadows Trail) for limited vehicle traffic (i.e. for emergency and maintenance). 	1. Prepare Archaeological Resources Management Plan	1. Regional Parks/Qualified Archaeologist	1. Regional Parks/Federated Indians of Graton Rancheria	1. Prior to construction

TABLE 3-1 (CONTINUED)
SUMMARY OF MITIGATION MEASURES

Mitigation No.	Mitigation Measure	Monitoring and Reporting Actions	Implementation Responsibility	Enforcement Responsibility	Mitigation Timing
Cultural Resources (continued)					
CUL-1a (cont.)	<ul style="list-style-type: none"> After the trail modification and mitigation activities are complete, the site will be inspected by a qualified archaeologist and a culturally-affiliated Native American representative to assess the condition of the site and record any potential problems on a periodic basis as agreed upon by the Federated Indians of Graton Rancheria and the Regional Parks. Any damage will be documented and a course of treatment will be determined by the archaeologist in consultation with the a culturally-affiliated Native American representative and Sonoma County Regional Parks. 				
CUL-1b	<p>Mitigation Measure CUL-1b: Preconstruction Training and Inadvertent Discovery of Archaeological Resources.</p> <p>Prior to any ground disturbing activities, a qualified archaeologist with expertise in California archaeology, in consultation with the Federated Indians of Graton Rancheria, will develop an archaeological resources training program for all construction and field workers involved in ground-disturbing activities that details the recognition and importance of archaeological resources, and establishes accidental discovery procedures should archaeological resources be encountered during construction.</p> <p>If an archaeological resource is encountered, all activity within 100 feet of the find should immediately halt until it can be evaluated by a qualified archaeologist (and a Native American representative if the artifacts are prehistoric). Prehistoric archaeological materials include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil ("midden") containing heat-affected rocks, artifacts, or shellfish remains; and stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered stone tools, such as hammerstones and pitted stones. If the archaeologist (and Native American representative) determines that the resources may be significant, they shall notify Sonoma County Regional Parks. If the resource cannot be avoided, an appropriate treatment plan for the resources shall be developed. The archaeologist shall consult with Native American representatives in determining appropriate treatment for prehistoric or Native American cultural resources.</p>	<ol style="list-style-type: none"> Develop and present archaeological resources training program If archaeological resource is encountered halt activity within 100 feet of the find and assess artifact by a qualified archaeologist and Native American representative Notify Sonoma County Regional Parks. Consult with Native American representatives to determine appropriate treatment 	<ol style="list-style-type: none"> Qualified Archaeologist/ Federated Indians of Graton Rancheria Construction contractor/ Qualified Archaeologist/ Native American representative Qualified Archaeologist/ Native American representative Qualified Archaeologist/ Regional Parks 	<ol style="list-style-type: none"> Regional Parks Regional Parks Regional Parks Regional Parks 	<ol style="list-style-type: none"> Prior to construction During construction During construction During construction

TABLE 3-1 (CONTINUED)
SUMMARY OF MITIGATION MEASURES

Mitigation No.	Mitigation Measure	Monitoring and Reporting Actions	Implementation Responsibility	Enforcement Responsibility	Mitigation Timing
Cultural Resources (continued)					
CUL-1b (cont.)	In considering any suggested mitigation proposed by the archaeologist and Native American representative, Sonoma County Regional Parks shall determine whether avoidance is feasible in light of factors such as the nature of the find, project design, costs, and other considerations. If avoidance is not feasible, other appropriate measures (e.g., data recovery as agreed upon between Sonoma County Regional Parks, the archaeological consultant, and Native American representatives) shall be instituted. Work may proceed in other parts of the Project site while mitigation for archaeological resources is being carried out.				
CUL-2	<p>Mitigation Measure CUL-2: Preconstruction Training and Inadvertent Discovery of Paleontological Resources.</p> <p>Prior to any ground disturbing activities, a qualified paleontologist meeting the standards of the Society of Vertebrate Paleontology with expertise in California paleontology shall develop a paleontological resources training program for all construction and field workers involved in ground-disturbing activities that details the recognition and importance of paleontological resources, and establishes accidental discovery procedures should paleontological resources be encountered during construction.</p> <p>If paleontological resources, such as fossilized bone, teeth, shell, tracks, trails, casts, molds, or impressions are discovered during ground-disturbing activities, work shall stop in that area and within 100 feet of the find until a qualified paleontologist can assess the nature and importance of the find and, if necessary, develop appropriate salvage measures in conformance with Society of Vertebrate Paleontology standards (2010), and in consultation with Sonoma County Regional Parks.</p>	<ol style="list-style-type: none"> 1. Develop and present paleontological resources training program 2. If paleontological resource is discovered, stop work within 100 feet of find and have qualified paleontologist assess and salvage as necessary. 	<ol style="list-style-type: none"> 1. Regional Parks/Qualified Paleontologist 2. Construction contractor/Qualified Paleontologist 	<ol style="list-style-type: none"> 1. Regional Parks 2. Regional Parks 	<ol style="list-style-type: none"> 1. Prior to construction 2. During construction
CUL-3	<p>Mitigation Measure CUL-3: Inadvertent Discovery of Human Remains.</p> <p>In the event of discovery or recognition of any human remains during ground disturbing activities, such activities should cease within 100 feet of the find until the Sonoma County Coroner has been contacted to determine that no investigation of the cause of death is required, in compliance with applicable State laws, including Section 7050.5 of the Health and Safety Code. If it is determined that the remains are</p>	<ol style="list-style-type: none"> 1. If human remains discovered, cease activities within 100 feet and notify Sonoma County Coroner 2. Contact Native American Heritage Commission within 24 hours if necessary 	<ol style="list-style-type: none"> 1. Construction Contractor 2. Regional Parks 	<ol style="list-style-type: none"> 1. Regional Parks 2. Regional Parks 	<ol style="list-style-type: none"> 1. During construction 2. During construction

TABLE 3-1 (CONTINUED)
SUMMARY OF MITIGATION MEASURES

Mitigation No.	Mitigation Measure	Monitoring and Reporting Actions	Implementation Responsibility	Enforcement Responsibility	Mitigation Timing
Cultural Resources (continued)					
CUL-3 (cont.)	Native American in origin, the Native American Heritage Commission (NAHC) will be contacted within 24 hours. The NAHC will then identify the person or persons it believes to be the most likely descendant (MLD) from the deceased Native American. The MLD would, in turn, make recommendations to Sonoma County Regional Parks for the appropriate means of treating the human remains and any grave goods.				
Hazards and Hazardous Materials					
	Mitigation Measure HAZ-1: Synthetic Turf Infill. The use of infill materials for the synthetic turf playing fields shall be restricted to use of natural materials such as cork and/or sand, or a type of synthetic material that meets or exceeds the accepted health risk criteria of one in a million cancer risk. The determination regarding product safety may rely upon expert review by County health officials, peer-reviewed study provided by the manufacturer, or criteria developed by other local governments for the selection of safe turf products (e.g., City and County of San Francisco). Recycled tire crumb infill shall not be used unless the forthcoming (2019) Office of Environmental Health Hazard Assessment (OEHHA) study, or the forthcoming U.S. Environmental Protection Agency study concludes the product meets or exceeds the acceptable health risk criteria (i.e., less than one in a million cancer risk). In addition, Regional Parks shall not select any synthetic turf product that does not meet the ASTM F3188 requirements, and the requirement for ASTM F3188 compliance shall be included in Regional Parks' bid solicitation for synthetic turf installation.	1. Ensure that synthetic turf material meet or exceed accepted health risk criteria of one in a million cancer risk. 2. Ensure that selected turf product meets ASTM F3188 requirements and this is included in bid solicitation for turf installation.	1. Regional Parks 2. Regional Parks	1. Regional Parks 2. Regional Parks	1. Prior to construction of playing fields 2. Prior to construction of playing fields
Hydrology and Water Quality					
	Mitigation Measure HYD-1: Synthetic Turf Infill. Regional Parks shall not select a synthetic turf field product unless and until it confirms the product's leachate potential meets California drinking water standards for volatile organic compounds, semi-volatile organic compounds and metals. Regional Parks' bid solicitation shall include a requirement that prospective vendors provide the information regarding the turf composition when submitting project bids, and Regional Parks shall reject any bids with incomplete information or insufficient	1. Ensure that bid solicitation includes a requirement that prospective vendors provide information regarding turf composition and a product analysis demonstrating that materials meet California drinking water standards.	1. Regional Parks	1. Regional Parks	1. Prior to construction of playing fields.

TABLE 3-1 (CONTINUED)
SUMMARY OF MITIGATION MEASURES

Mitigation No.	Mitigation Measure	Monitoring and Reporting Actions	Implementation Responsibility	Enforcement Responsibility	Mitigation Timing
Hydrology and Water Quality (cont.)					
	data. The bid solicitation shall also include a requirement that the vendor submit a product analysis quantifying the content of its product that demonstrates maximum levels for soluble chromium, lead, and zinc in infill materials are below California drinking water standards.				
Recreation					
	Refer to mitigation measures for Air Quality, Biological Resources, Cultural Resources, Hazards and Hazardous Materials, Hydrology and Water Quality, and Transportation/Traffic				
Transportation/Traffic					
TRA-1	<p>Mitigation Measure TRA-1: Traffic Control Plan.</p> <p>The County shall require the construction contractor(s) to prepare and implement a traffic control plan (TCP) to reduce traffic impacts on the roadways at and near the work sites, as well as to reduce potential traffic safety hazards and ensure adequate access for emergency responders and construction vehicles, as appropriate. The County and construction contractor(s) shall coordinate development and implementation of this plan with the City of Sonoma and Caltrans, as appropriate. To the extent applicable, the TCP shall conform to the California Manual on Uniform Traffic Control Devices (MUTCD), Part 6 (Temporary Traffic Control) (Caltrans, 2014). The TCP shall include, but not be limited to, the following elements:</p> <ul style="list-style-type: none"> • Circulation and detour plans to minimize impacts on local road circulation during road and lane closures. Flaggers and/or signage shall be used to guide vehicles through and/or around the construction zone. • Identifying truck routes designated by the County. Haul routes that minimize truck traffic on local roadways shall be utilized to the extent possible. • Sufficient staging areas for trucks accessing construction zones to minimize disruption of access to adjacent public right-of-ways. 	1. Prepare and implement traffic control plan	1. Construction Contractor	1. Construction Contractor/ Regional Parks	1. Prior to construction

TABLE 3-1 (CONTINUED)
SUMMARY OF MITIGATION MEASURES

Mitigation No.	Mitigation Measure	Monitoring and Reporting Actions	Implementation Responsibility	Enforcement Responsibility	Mitigation Timing
Transportation/Traffic (continued)					
TRA-1 (cont.)	<ul style="list-style-type: none"> Controlling and monitoring construction vehicle movement through the enforcement of standard construction specifications by on-site inspectors. Scheduling truck trips outside the peak morning and evening commute hours to the extent possible. Limiting the duration of road and lane closures to the extent possible. Construction activities that may encroach on bicycle routes or multi-use paths, advance warning signs (e.g., "Bicyclists Allowed Use of Full Lane" and/or "Share the Road") shall be posted that indicate the presence of such users. Implementing roadside safety protocols. Advance "Road Work Ahead" warning and speed control signs (including those informing drivers of State legislated double fines for speed infractions in a construction zone) shall be posted to reduce speeds and provide safe traffic flow through the work zone. Coordinating construction administrators of police and fire stations (including all fire protection agencies), and recreational facility managers. Operators shall be notified in advance of the timing, location, and duration of construction activities and the locations of detours and lane closures, where applicable. Repairing and restoring affected roadway rights-of-way to their original condition after construction is completed. 				
Tribal Cultural Resources					
CUL-1a	See Cultural Resources, above.				
CUL-1b	See Cultural Resources, above.				

Appendix A

Air Quality – Emissions Estimates

Maxwell Farms Regional Park - Sonoma-San Francisco County, Annual

Maxwell Farms Regional Park Sonoma-San Francisco County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	68.00	Space	0.61	27,200.00	0
City Park	29.00	Acre	29.00	1,263,240.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	75
Climate Zone	4			Operational Year	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Assumed construction schedule

Off-road Equipment - Assumed construction equipment

Off-road Equipment - Assumed construction equipment

Off-road Equipment - Assumed construction equipment

Trips and VMT - Assumed CalEEMod default trips for vendor trips used imported material volumes to approximate total haul trucks and 10 works on site

Grading -

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Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	440.00	260.00
tblConstructionPhase	NumDays	440.00	262.00
tblConstructionPhase	NumDays	440.00	262.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Phase 1
tblOffRoadEquipment	PhaseName		Phase 2
tblOffRoadEquipment	PhaseName		Phase 1
tblOffRoadEquipment	PhaseName		Phase 2
tblOffRoadEquipment	PhaseName		Phase 1
tblOffRoadEquipment	PhaseName		Phase 2
tblOffRoadEquipment	PhaseName		Phase 1
tblOffRoadEquipment	PhaseName		Phase 2
tblOffRoadEquipment	PhaseName		Phase 1

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tblOffRoadEquipment	PhaseName		Phase 2
tblOffRoadEquipment	PhaseName		Phase 1
tblOffRoadEquipment	PhaseName		Phase 2
tblOffRoadEquipment	PhaseName		Phase 1
tblOffRoadEquipment	PhaseName		Phase 2
tblTripsAndVMT	HaulingTripNumber	0.00	1,538.00
tblTripsAndVMT	HaulingTripNumber	0.00	1,170.00
tblTripsAndVMT	HaulingTripNumber	0.00	300.00
tblTripsAndVMT	WorkerTripNumber	469.00	20.00
tblTripsAndVMT	WorkerTripNumber	469.00	20.00
tblTripsAndVMT	WorkerTripNumber	469.00	20.00

2.0 Emissions Summary

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2.1 Overall Construction**Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.2999	4.3996	2.2202	7.8800e-003	0.1238	0.1161	0.2399	0.0352	0.1106	0.1458	0.0000	731.9212	731.9212	0.0948	0.0000	734.2908
2020	0.4186	6.2922	3.3321	0.0122	0.1956	0.1565	0.3521	0.0555	0.1490	0.2045	0.0000	1,128.3146	1,128.3146	0.1434	0.0000	1,131.9001
2021	0.3722	5.6164	3.1870	0.0118	0.1857	0.1312	0.3170	0.0529	0.1248	0.1777	0.0000	1,090.7261	1,090.7261	0.1389	0.0000	1,094.1977
2022	0.1210	1.8213	1.1144	4.1900e-003	0.0652	0.0403	0.1055	0.0186	0.0383	0.0569	0.0000	386.2766	386.2766	0.0492	0.0000	387.5070
Maximum	0.4186	6.2922	3.3321	0.0122	0.1956	0.1565	0.3521	0.0555	0.1490	0.2045	0.0000	1,128.3146	1,128.3146	0.1434	0.0000	1,131.9001

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2.1 Overall Construction**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.2999	4.3996	2.2202	7.8800e-003	0.1238	0.1161	0.2399	0.0352	0.1106	0.1458	0.0000	731.9208	731.9208	0.0948	0.0000	734.2904
2020	0.4186	6.2922	3.3321	0.0122	0.1956	0.1565	0.3521	0.0555	0.1490	0.2045	0.0000	1,128.3141	1,128.3141	0.1434	0.0000	1,131.8995
2021	0.3722	5.6164	3.1870	0.0118	0.1857	0.1312	0.3170	0.0529	0.1248	0.1777	0.0000	1,090.7255	1,090.7255	0.1389	0.0000	1,094.1972
2022	0.1210	1.8213	1.1144	4.1900e-003	0.0652	0.0403	0.1055	0.0186	0.0383	0.0569	0.0000	386.2764	386.2764	0.0492	0.0000	387.5068
Maximum	0.4186	6.2922	3.3321	0.0122	0.1956	0.1565	0.3521	0.0555	0.1490	0.2045	0.0000	1,128.3141	1,128.3141	0.1434	0.0000	1,131.8995

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	4-1-2019	6-30-2019	1.0186	1.0186
2	7-1-2019	9-30-2019	1.8375	1.8375
3	10-1-2019	12-31-2019	1.8527	1.8527
4	1-1-2020	3-31-2020	1.6764	1.6764
5	4-1-2020	6-30-2020	1.6569	1.6569
6	7-1-2020	9-30-2020	1.6688	1.6688
7	10-1-2020	12-31-2020	1.6803	1.6803
8	1-1-2021	3-31-2021	1.4956	1.4956

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9	4-1-2021	6-30-2021	1.4873	1.4873
10	7-1-2021	9-30-2021	1.4902	1.4902
11	10-1-2021	12-31-2021	1.4982	1.4982
12	1-1-2022	3-31-2022	1.3291	1.3291
13	4-1-2022	6-30-2022	0.6172	0.6172
		Highest	1.8527	1.8527

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0143	1.0000e-005	9.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.7300e-003	1.7300e-003	0.0000	0.0000	1.8500e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.7695	2.7695	1.3000e-004	3.0000e-005	2.7803
Mobile	0.0731	0.3522	0.7905	2.1100e-003	0.1607	2.8600e-003	0.1635	0.0432	2.6900e-003	0.0459	0.0000	193.7787	193.7787	9.2800e-003	0.0000	194.0106
Waste						0.0000	0.0000		0.0000	0.0000	0.4364	0.0000	0.4364	0.0258	0.0000	1.0812
Water						0.0000	0.0000		0.0000	0.0000	0.0000	30.3289	30.3289	1.3700e-003	2.8000e-004	30.4477
Total	0.0874	0.3522	0.7914	2.1100e-003	0.1607	2.8600e-003	0.1635	0.0432	2.6900e-003	0.0459	0.4364	226.8787	227.3152	0.0366	3.1000e-004	228.3217

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2.2 Overall Operational**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0143	1.0000e-005	9.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.7300e-003	1.7300e-003	0.0000	0.0000	1.8500e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.7695	2.7695	1.3000e-004	3.0000e-005	2.7803
Mobile	0.0731	0.3522	0.7905	2.1100e-003	0.1607	2.8600e-003	0.1635	0.0432	2.6900e-003	0.0459	0.0000	193.7787	193.7787	9.2800e-003	0.0000	194.0106
Waste						0.0000	0.0000		0.0000	0.0000	0.4364	0.0000	0.4364	0.0258	0.0000	1.0812
Water						0.0000	0.0000		0.0000	0.0000	0.0000	30.3289	30.3289	1.3700e-003	2.8000e-004	30.4477
Total	0.0874	0.3522	0.7914	2.1100e-003	0.1607	2.8600e-003	0.1635	0.0432	2.6900e-003	0.0459	0.4364	226.8787	227.3152	0.0366	3.1000e-004	228.3217

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Phase 1	Building Construction	5/11/2019	5/10/2020	5	260	
2	Phase 2	Building Construction	5/11/2020	5/11/2021	5	262	
3	Phase 3	Building Construction	5/12/2021	5/12/2022	5	262	

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Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.61

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Phase 1	Excavators	1	8.00	158	0.38
Phase 1	Generator Sets	1	8.00	84	0.74
Phase 1	Graders	1	8.00	187	0.41
Phase 1	Pavers	1	8.00	130	0.42
Phase 1	Plate Compactors	2	8.00	8	0.43
Phase 1	Pumps	1	8.00	84	0.74
Phase 1	Rubber Tired Loaders	1	8.00	203	0.36
Phase 1	Skid Steer Loaders	1	8.00	65	0.37
Phase 2	Excavators	1	8.00	158	0.38
Phase 2	Generator Sets	1	8.00	84	0.74
Phase 2	Graders	1	8.00	187	0.41
Phase 2	Pavers	1	8.00	130	0.42
Phase 2	Plate Compactors	2	8.00	8	0.43
Phase 2	Pumps	1	8.00	84	0.74
Phase 2	Rubber Tired Loaders	1	8.00	203	0.36
Phase 2	Skid Steer Loaders	1	8.00	65	0.37
Phase 3	Excavators	1	8.00	158	0.38
Phase 3	Generator Sets	1	8.00	84	0.74
Phase 3	Graders	1	8.00	187	0.41
Phase 3	Pavers	1	8.00	130	0.42
Phase 3	Plate Compactors	2	8.00	8	0.43
Phase 3	Pumps	1	8.00	84	0.74
Phase 3	Rubber Tired Loaders	1	8.00	203	0.36
Phase 3	Skid Steer Loaders	1	8.00	65	0.37

Trips and VMT

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Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Phase 1	9	20.00	183.00	1,538.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Phase 2	9	20.00	183.00	1,170.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Phase 3	9	20.00	183.00	300.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Phase 1 - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2098	2.2089	1.5863	3.2500e-003		0.0994	0.0994		0.0947	0.0947	0.0000	285.7815	285.7815	0.0656	0.0000	287.4213
Total	0.2098	2.2089	1.5863	3.2500e-003		0.0994	0.0994		0.0947	0.0947	0.0000	285.7815	285.7815	0.0656	0.0000	287.4213

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3.2 Phase 1 - 2019**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.6100e-003	0.1596	0.0326	3.9000e-004	0.0116	7.9000e-004	0.0124	3.0900e-003	7.6000e-004	3.8500e-003	0.0000	38.4373	38.4373	2.4400e-003	0.0000	38.4983
Vendor	0.0768	2.0246	0.5363	4.1000e-003	0.0991	0.0158	0.1148	0.0286	0.0151	0.0437	0.0000	395.2445	395.2445	0.0263	0.0000	395.9007
Worker	8.6700e-003	6.5400e-003	0.0650	1.4000e-004	0.0131	1.1000e-004	0.0132	3.4900e-003	1.0000e-004	3.5900e-003	0.0000	12.4579	12.4579	5.1000e-004	0.0000	12.4705
Total	0.0901	2.1907	0.6339	4.6300e-003	0.1238	0.0167	0.1405	0.0352	0.0159	0.0512	0.0000	446.1397	446.1397	0.0292	0.0000	446.8695

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2098	2.2089	1.5863	3.2500e-003		0.0994	0.0994		0.0947	0.0947	0.0000	285.7812	285.7812	0.0656	0.0000	287.4209
Total	0.2098	2.2089	1.5863	3.2500e-003		0.0994	0.0994		0.0947	0.0947	0.0000	285.7812	285.7812	0.0656	0.0000	287.4209

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3.2 Phase 1 - 2019**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.6100e-003	0.1596	0.0326	3.9000e-004	0.0116	7.9000e-004	0.0124	3.0900e-003	7.6000e-004	3.8500e-003	0.0000	38.4373	38.4373	2.4400e-003	0.0000	38.4983
Vendor	0.0768	2.0246	0.5363	4.1000e-003	0.0991	0.0158	0.1148	0.0286	0.0151	0.0437	0.0000	395.2445	395.2445	0.0263	0.0000	395.9007
Worker	8.6700e-003	6.5400e-003	0.0650	1.4000e-004	0.0131	1.1000e-004	0.0132	3.4900e-003	1.0000e-004	3.5900e-003	0.0000	12.4579	12.4579	5.1000e-004	0.0000	12.4705
Total	0.0901	2.1907	0.6339	4.6300e-003	0.1238	0.0167	0.1405	0.0352	0.0159	0.0512	0.0000	446.1397	446.1397	0.0292	0.0000	446.8695

3.2 Phase 1 - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1088	1.1407	0.8786	1.8100e-003		0.0498	0.0498		0.0474	0.0474	0.0000	156.8601	156.8601	0.0361	0.0000	157.7637
Total	0.1088	1.1407	0.8786	1.8100e-003		0.0498	0.0498		0.0474	0.0474	0.0000	156.8601	156.8601	0.0361	0.0000	157.7637

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3.2 Phase 1 - 2020**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.1900e-003	0.0812	0.0166	2.2000e-004	0.0108	2.9000e-004	0.0111	2.7700e-003	2.8000e-004	3.0500e-003	0.0000	21.1896	21.1896	1.3000e-003	0.0000	21.2221
Vendor	0.0335	1.0212	0.2578	2.2700e-003	0.0552	5.4400e-003	0.0606	0.0160	5.2000e-003	0.0212	0.0000	219.0852	219.0852	0.0134	0.0000	219.4207
Worker	4.4300e-003	3.2200e-003	0.0324	7.0000e-005	7.3000e-003	6.0000e-005	7.3600e-003	1.9400e-003	5.0000e-005	2.0000e-003	0.0000	6.7236	6.7236	2.5000e-004	0.0000	6.7297
Total	0.0401	1.1056	0.3068	2.5600e-003	0.0732	5.7900e-003	0.0790	0.0207	5.5300e-003	0.0262	0.0000	246.9983	246.9983	0.0150	0.0000	247.3725

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1088	1.1407	0.8786	1.8100e-003		0.0498	0.0498		0.0474	0.0474	0.0000	156.8599	156.8599	0.0361	0.0000	157.7635
Total	0.1088	1.1407	0.8786	1.8100e-003		0.0498	0.0498		0.0474	0.0474	0.0000	156.8599	156.8599	0.0361	0.0000	157.7635

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3.2 Phase 1 - 2020**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.1900e-003	0.0812	0.0166	2.2000e-004	0.0108	2.9000e-004	0.0111	2.7700e-003	2.8000e-004	3.0500e-003	0.0000	21.1896	21.1896	1.3000e-003	0.0000	21.2221
Vendor	0.0335	1.0212	0.2578	2.2700e-003	0.0552	5.4400e-003	0.0606	0.0160	5.2000e-003	0.0212	0.0000	219.0852	219.0852	0.0134	0.0000	219.4207
Worker	4.4300e-003	3.2200e-003	0.0324	7.0000e-005	7.3000e-003	6.0000e-005	7.3600e-003	1.9400e-003	5.0000e-005	2.0000e-003	0.0000	6.7236	6.7236	2.5000e-004	0.0000	6.7297
Total	0.0401	1.1056	0.3068	2.5600e-003	0.0732	5.7900e-003	0.0790	0.0207	5.5300e-003	0.0262	0.0000	246.9983	246.9983	0.0150	0.0000	247.3725

3.3 Phase 2 - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1977	2.0728	1.5966	3.2900e-003		0.0905	0.0905		0.0861	0.0861	0.0000	285.0468	285.0468	0.0657	0.0000	286.6889
Total	0.1977	2.0728	1.5966	3.2900e-003		0.0905	0.0905		0.0861	0.0861	0.0000	285.0468	285.0468	0.0657	0.0000	286.6889

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3.3 Phase 2 - 2020**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.0000e-003	0.1114	0.0227	3.0000e-004	8.8600e-003	4.0000e-004	9.2600e-003	2.3500e-003	3.8000e-004	2.7300e-003	0.0000	29.0688	29.0688	1.7900e-003	0.0000	29.1134
Vendor	0.0609	1.8557	0.4685	4.1200e-003	0.1003	9.8800e-003	0.1101	0.0290	9.4500e-003	0.0384	0.0000	398.1225	398.1225	0.0244	0.0000	398.7322
Worker	8.0600e-003	5.8600e-003	0.0589	1.4000e-004	0.0133	1.1000e-004	0.0134	3.5300e-003	1.0000e-004	3.6300e-003	0.0000	12.2181	12.2181	4.5000e-004	0.0000	12.2293
Total	0.0719	1.9730	0.5501	4.5600e-003	0.1224	0.0104	0.1328	0.0349	9.9300e-003	0.0448	0.0000	439.4094	439.4094	0.0266	0.0000	440.0749

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1977	2.0728	1.5966	3.2900e-003		0.0905	0.0905		0.0861	0.0861	0.0000	285.0465	285.0465	0.0657	0.0000	286.6886
Total	0.1977	2.0728	1.5966	3.2900e-003		0.0905	0.0905		0.0861	0.0861	0.0000	285.0465	285.0465	0.0657	0.0000	286.6886

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3.3 Phase 2 - 2020**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.0000e-003	0.1114	0.0227	3.0000e-004	8.8600e-003	4.0000e-004	9.2600e-003	2.3500e-003	3.8000e-004	2.7300e-003	0.0000	29.0688	29.0688	1.7900e-003	0.0000	29.1134
Vendor	0.0609	1.8557	0.4685	4.1200e-003	0.1003	9.8800e-003	0.1101	0.0290	9.4500e-003	0.0384	0.0000	398.1225	398.1225	0.0244	0.0000	398.7322
Worker	8.0600e-003	5.8600e-003	0.0589	1.4000e-004	0.0133	1.1000e-004	0.0134	3.5300e-003	1.0000e-004	3.6300e-003	0.0000	12.2181	12.2181	4.5000e-004	0.0000	12.2293
Total	0.0719	1.9730	0.5501	4.5600e-003	0.1224	0.0104	0.1328	0.0349	9.9300e-003	0.0448	0.0000	439.4094	439.4094	0.0266	0.0000	440.0749

3.3 Phase 2 - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1007	1.0425	0.8732	1.8100e-003		0.0443	0.0443		0.0421	0.0421	0.0000	156.8147	156.8147	0.0359	0.0000	157.7111
Total	0.1007	1.0425	0.8732	1.8100e-003		0.0443	0.0443		0.0421	0.0421	0.0000	156.8147	156.8147	0.0359	0.0000	157.7111

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3.3 Phase 2 - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.5600e-003	0.0564	0.0120	1.6000e-004	8.1800e-003	1.9000e-004	8.3700e-003	2.1100e-003	1.8000e-004	2.2900e-003	0.0000	15.7873	15.7873	9.7000e-004	0.0000	15.8116
Vendor	0.0270	0.9265	0.2268	2.2500e-003	0.0552	2.3200e-003	0.0575	0.0159	2.2200e-003	0.0182	0.0000	217.1128	217.1128	0.0129	0.0000	217.4354
Worker	4.1100e-003	2.8700e-003	0.0293	7.0000e-005	7.3000e-003	6.0000e-005	7.3600e-003	1.9400e-003	5.0000e-005	2.0000e-003	0.0000	6.4910	6.4910	2.2000e-004	0.0000	6.4965
Total	0.0327	0.9858	0.2681	2.4800e-003	0.0706	2.5700e-003	0.0732	0.0200	2.4500e-003	0.0225	0.0000	239.3911	239.3911	0.0141	0.0000	239.7434

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1007	1.0425	0.8732	1.8100e-003		0.0443	0.0443		0.0421	0.0421	0.0000	156.8146	156.8146	0.0359	0.0000	157.7109
Total	0.1007	1.0425	0.8732	1.8100e-003		0.0443	0.0443		0.0421	0.0421	0.0000	156.8146	156.8146	0.0359	0.0000	157.7109

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3.3 Phase 2 - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.5600e-003	0.0564	0.0120	1.6000e-004	8.1800e-003	1.9000e-004	8.3700e-003	2.1100e-003	1.8000e-004	2.2900e-003	0.0000	15.7873	15.7873	9.7000e-004	0.0000	15.8116
Vendor	0.0270	0.9265	0.2268	2.2500e-003	0.0552	2.3200e-003	0.0575	0.0159	2.2200e-003	0.0182	0.0000	217.1128	217.1128	0.0129	0.0000	217.4354
Worker	4.1100e-003	2.8700e-003	0.0293	7.0000e-005	7.3000e-003	6.0000e-005	7.3600e-003	1.9400e-003	5.0000e-005	2.0000e-003	0.0000	6.4910	6.4910	2.2000e-004	0.0000	6.4965
Total	0.0327	0.9858	0.2681	2.4800e-003	0.0706	2.5700e-003	0.0732	0.0200	2.4500e-003	0.0225	0.0000	239.3911	239.3911	0.0141	0.0000	239.7434

3.4 Phase 3 - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1819	1.8832	1.5774	3.2700e-003		0.0800	0.0800		0.0760	0.0760	0.0000	283.2782	283.2782	0.0648	0.0000	284.8974
Total	0.1819	1.8832	1.5774	3.2700e-003		0.0800	0.0800		0.0760	0.0760	0.0000	283.2782	283.2782	0.0648	0.0000	284.8974

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3.4 Phase 3 - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.2000e-004	0.0261	5.5600e-003	7.0000e-005	2.2700e-003	9.0000e-005	2.3600e-003	6.0000e-004	9.0000e-005	6.9000e-004	0.0000	7.3126	7.3126	4.5000e-004	0.0000	7.3238
Vendor	0.0489	1.6736	0.4098	4.0600e-003	0.0997	4.2000e-003	0.1038	0.0288	4.0200e-003	0.0328	0.0000	392.2038	392.2038	0.0233	0.0000	392.7865
Worker	7.4300e-003	5.1900e-003	0.0529	1.3000e-004	0.0132	1.0000e-004	0.0133	3.5100e-003	1.0000e-004	3.6000e-003	0.0000	11.7256	11.7256	4.0000e-004	0.0000	11.7355
Total	0.0570	1.7049	0.4683	4.2600e-003	0.1151	4.3900e-003	0.1195	0.0329	4.2100e-003	0.0371	0.0000	411.2420	411.2420	0.0242	0.0000	411.8458

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1819	1.8832	1.5774	3.2700e-003		0.0800	0.0800		0.0760	0.0760	0.0000	283.2779	283.2779	0.0648	0.0000	284.8971
Total	0.1819	1.8832	1.5774	3.2700e-003		0.0800	0.0800		0.0760	0.0760	0.0000	283.2779	283.2779	0.0648	0.0000	284.8971

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3.4 Phase 3 - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.2000e-004	0.0261	5.5600e-003	7.0000e-005	2.2700e-003	9.0000e-005	2.3600e-003	6.0000e-004	9.0000e-005	6.9000e-004	0.0000	7.3126	7.3126	4.5000e-004	0.0000	7.3238
Vendor	0.0489	1.6736	0.4098	4.0600e-003	0.0997	4.2000e-003	0.1038	0.0288	4.0200e-003	0.0328	0.0000	392.2038	392.2038	0.0233	0.0000	392.7865
Worker	7.4300e-003	5.1900e-003	0.0529	1.3000e-004	0.0132	1.0000e-004	0.0133	3.5100e-003	1.0000e-004	3.6000e-003	0.0000	11.7256	11.7256	4.0000e-004	0.0000	11.7355
Total	0.0570	1.7049	0.4683	4.2600e-003	0.1151	4.3900e-003	0.1195	0.0329	4.2100e-003	0.0371	0.0000	411.2420	411.2420	0.0242	0.0000	411.8458

3.4 Phase 3 - 2022**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0915	0.9159	0.8746	1.8300e-003		0.0381	0.0381		0.0363	0.0363	0.0000	158.5114	158.5114	0.0361	0.0000	159.4127
Total	0.0915	0.9159	0.8746	1.8300e-003		0.0381	0.0381		0.0363	0.0363	0.0000	158.5114	158.5114	0.0361	0.0000	159.4127

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3.4 Phase 3 - 2022**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.8000e-004	0.0134	2.9900e-003	4.0000e-005	2.1000e-003	4.0000e-005	2.1400e-003	5.4000e-004	4.0000e-005	5.8000e-004	0.0000	4.0357	4.0357	2.5000e-004	0.0000	4.0419
Vendor	0.0253	0.8894	0.2103	2.2500e-003	0.0558	2.0400e-003	0.0578	0.0161	1.9500e-003	0.0181	0.0000	217.4088	217.4088	0.0127	0.0000	217.7267
Worker	3.8500e-003	2.5800e-003	0.0265	7.0000e-005	7.3800e-003	6.0000e-005	7.4300e-003	1.9600e-003	5.0000e-005	2.0100e-003	0.0000	6.3207	6.3207	2.0000e-004	0.0000	6.3256
Total	0.0295	0.9054	0.2399	2.3600e-003	0.0652	2.1400e-003	0.0674	0.0186	2.0400e-003	0.0207	0.0000	227.7652	227.7652	0.0132	0.0000	228.0942

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0915	0.9159	0.8746	1.8300e-003		0.0381	0.0381		0.0363	0.0363	0.0000	158.5112	158.5112	0.0361	0.0000	159.4125
Total	0.0915	0.9159	0.8746	1.8300e-003		0.0381	0.0381		0.0363	0.0363	0.0000	158.5112	158.5112	0.0361	0.0000	159.4125

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3.4 Phase 3 - 2022**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.8000e-004	0.0134	2.9900e-003	4.0000e-005	2.1000e-003	4.0000e-005	2.1400e-003	5.4000e-004	4.0000e-005	5.8000e-004	0.0000	4.0357	4.0357	2.5000e-004	0.0000	4.0419
Vendor	0.0253	0.8894	0.2103	2.2500e-003	0.0558	2.0400e-003	0.0578	0.0161	1.9500e-003	0.0181	0.0000	217.4088	217.4088	0.0127	0.0000	217.7267
Worker	3.8500e-003	2.5800e-003	0.0265	7.0000e-005	7.3800e-003	6.0000e-005	7.4300e-003	1.9600e-003	5.0000e-005	2.0100e-003	0.0000	6.3207	6.3207	2.0000e-004	0.0000	6.3256
Total	0.0295	0.9054	0.2399	2.3600e-003	0.0652	2.1400e-003	0.0674	0.0186	2.0400e-003	0.0207	0.0000	227.7652	227.7652	0.0132	0.0000	228.0942

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

Maxwell Farms Regional Park - Sonoma-San Francisco County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0731	0.3522	0.7905	2.1100e-003	0.1607	2.8600e-003	0.1635	0.0432	2.6900e-003	0.0459	0.0000	193.7787	193.7787	9.2800e-003	0.0000	194.0106
Unmitigated	0.0731	0.3522	0.7905	2.1100e-003	0.1607	2.8600e-003	0.1635	0.0432	2.6900e-003	0.0459	0.0000	193.7787	193.7787	9.2800e-003	0.0000	194.0106

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	54.81	659.75	485.46	432,844	432,844
Parking Lot	0.00	0.00	0.00		
Total	54.81	659.75	485.46	432,844	432,844

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.568926	0.041373	0.172015	0.112977	0.030659	0.007080	0.028564	0.025868	0.003029	0.001930	0.005517	0.000872	0.001190
Parking Lot	0.568926	0.041373	0.172015	0.112977	0.030659	0.007080	0.028564	0.025868	0.003029	0.001930	0.005517	0.000872	0.001190

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5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

[illegible]

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5.2 Energy by Land Use - NaturalGas

Unmitigated

[illegible]

Mitigated

[illegible]

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5.3 Energy by Land Use - Electricity**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	9520	2.7695	1.3000e-004	3.0000e-005	2.7803
Total		2.7695	1.3000e-004	3.0000e-005	2.7803

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	9520	2.7695	1.3000e-004	3.0000e-005	2.7803
Total		2.7695	1.3000e-004	3.0000e-005	2.7803

6.0 Area Detail**6.1 Mitigation Measures Area**

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0143	1.0000e-005	9.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.7300e-003	1.7300e-003	0.0000	0.0000	1.8500e-003
Unmitigated	0.0143	1.0000e-005	9.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.7300e-003	1.7300e-003	0.0000	0.0000	1.8500e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	5.7000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0136					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.0000e-005	1.0000e-005	9.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.7300e-003	1.7300e-003	0.0000	0.0000	1.8500e-003
Total	0.0143	1.0000e-005	9.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.7300e-003	1.7300e-003	0.0000	0.0000	1.8500e-003

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6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	5.7000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0136					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.0000e-005	1.0000e-005	9.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.7300e-003	1.7300e-003	0.0000	0.0000	1.8500e-003
Total	0.0143	1.0000e-005	9.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.7300e-003	1.7300e-003	0.0000	0.0000	1.8500e-003

7.0 Water Detail**7.1 Mitigation Measures Water**

Maxwell Farms Regional Park - Sonoma-San Francisco County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	30.3289	1.3700e-003	2.8000e-004	30.4477
Unmitigated	30.3289	1.3700e-003	2.8000e-004	30.4477

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 29.787	30.3289	1.3700e-003	2.8000e-004	30.4477
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		30.3289	1.3700e-003	2.8000e-004	30.4477

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7.2 Water by Land Use**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 29.787	30.3289	1.3700e-003	2.8000e-004	30.4477
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		30.3289	1.3700e-003	2.8000e-004	30.4477

8.0 Waste Detail**8.1 Mitigation Measures Waste****Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.4364	0.0258	0.0000	1.0812
Unmitigated	0.4364	0.0258	0.0000	1.0812

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8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	2.15	0.4364	0.0258	0.0000	1.0812
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		0.4364	0.0258	0.0000	1.0812

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	2.15	0.4364	0.0258	0.0000	1.0812
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		0.4364	0.0258	0.0000	1.0812

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

Maxwell Farms Regional Park - Sonoma-San Francisco County, Winter

Maxwell Farms Regional Park Sonoma-San Francisco County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	68.00	Space	0.61	27,200.00	0
City Park	29.00	Acre	29.00	1,263,240.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	75
Climate Zone	4			Operational Year	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Assumed construction schedule

Off-road Equipment - Assumed construction equipment

Off-road Equipment - Assumed construction equipment

Off-road Equipment - Assumed construction equipment

Trips and VMT - Assumed CalEEMod default trips for vendor trips used imported material volumes to approximate total haul trucks and 10 works on site

Grading -

Maxwell Farms Regional Park - Sonoma-San Francisco County, Winter

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	440.00	260.00
tblConstructionPhase	NumDays	440.00	262.00
tblConstructionPhase	NumDays	440.00	262.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Phase 1
tblOffRoadEquipment	PhaseName		Phase 2
tblOffRoadEquipment	PhaseName		Phase 1
tblOffRoadEquipment	PhaseName		Phase 2
tblOffRoadEquipment	PhaseName		Phase 1
tblOffRoadEquipment	PhaseName		Phase 2
tblOffRoadEquipment	PhaseName		Phase 1
tblOffRoadEquipment	PhaseName		Phase 2
tblOffRoadEquipment	PhaseName		Phase 1

Maxwell Farms Regional Park - Sonoma-San Francisco County, Winter

tblOffRoadEquipment	PhaseName		Phase 2
tblOffRoadEquipment	PhaseName		Phase 1
tblOffRoadEquipment	PhaseName		Phase 2
tblOffRoadEquipment	PhaseName		Phase 1
tblOffRoadEquipment	PhaseName		Phase 2
tblTripsAndVMT	HaulingTripNumber	0.00	1,538.00
tblTripsAndVMT	HaulingTripNumber	0.00	1,170.00
tblTripsAndVMT	HaulingTripNumber	0.00	300.00
tblTripsAndVMT	WorkerTripNumber	469.00	20.00
tblTripsAndVMT	WorkerTripNumber	469.00	20.00
tblTripsAndVMT	WorkerTripNumber	469.00	20.00

2.0 Emissions Summary

Maxwell Farms Regional Park - Sonoma-San Francisco County, Winter

2.1 Overall Construction (Maximum Daily Emission)**Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	3.6310	52.7565	27.0929	0.0938	1.5419	1.3925	2.9344	0.4363	1.3271	1.7634	0.0000	9,593.588 4	9,593.588 4	1.2674	0.0000	9,625.274 1
2020	3.2358	48.3472	25.9209	0.0934	1.6386	1.1971	2.8357	0.4600	1.1397	1.5997	0.0000	9,502.908 4	9,502.908 4	1.2261	0.0000	9,533.561 7
2021	2.8985	43.6312	24.9296	0.0917	1.5803	1.0088	2.5891	0.4450	0.9593	1.4043	0.0000	9,322.619 3	9,322.619 3	1.1978	0.0000	9,352.564 6
2022	2.6025	38.7482	24.0530	0.0885	1.4426	0.8577	2.3003	0.4096	0.8165	1.2261	0.0000	8,992.032 5	8,992.032 5	1.1673	0.0000	9,021.214 7
Maximum	3.6310	52.7565	27.0929	0.0938	1.6386	1.3925	2.9344	0.4600	1.3271	1.7634	0.0000	9,593.588 4	9,593.588 4	1.2674	0.0000	9,625.274 1

Maxwell Farms Regional Park - Sonoma-San Francisco County, Winter

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	3.6310	52.7565	27.0929	0.0938	1.5419	1.3925	2.9344	0.4363	1.3271	1.7634	0.0000	9,593.5884	9,593.5884	1.2674	0.0000	9,625.2741
2020	3.2358	48.3472	25.9209	0.0934	1.6386	1.1971	2.8357	0.4600	1.1397	1.5997	0.0000	9,502.9084	9,502.9084	1.2261	0.0000	9,533.5617
2021	2.8985	43.6312	24.9296	0.0917	1.5803	1.0088	2.5891	0.4450	0.9593	1.4043	0.0000	9,322.6193	9,322.6193	1.1978	0.0000	9,352.5646
2022	2.6025	38.7482	24.0530	0.0885	1.4426	0.8577	2.3003	0.4096	0.8165	1.2261	0.0000	8,992.0325	8,992.0325	1.1673	0.0000	9,021.2147
Maximum	3.6310	52.7565	27.0929	0.0938	1.6386	1.3925	2.9344	0.4600	1.3271	1.7634	0.0000	9,593.5884	9,593.5884	1.2674	0.0000	9,625.2741

[illegible]

Maxwell Farms Regional Park - Sonoma-San Francisco County, Winter

2.2 Overall Operational**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0788	9.0000e-005	9.9700e-003	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0212	0.0212	6.0000e-005		0.0227
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	1.3046	6.4499	14.9166	0.0374	3.0037	0.0514	3.0551	0.8054	0.0485	0.8539		3,782.0591	3,782.0591	0.1880		3,786.7589
Total	1.3834	6.4500	14.9265	0.0374	3.0037	0.0515	3.0551	0.8054	0.0486	0.8539		3,782.0804	3,782.0804	0.1881	0.0000	3,786.7815

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0788	9.0000e-005	9.9700e-003	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0212	0.0212	6.0000e-005		0.0227
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	1.3046	6.4499	14.9166	0.0374	3.0037	0.0514	3.0551	0.8054	0.0485	0.8539		3,782.0591	3,782.0591	0.1880		3,786.7589
Total	1.3834	6.4500	14.9265	0.0374	3.0037	0.0515	3.0551	0.8054	0.0486	0.8539		3,782.0804	3,782.0804	0.1881	0.0000	3,786.7815

Maxwell Farms Regional Park - Sonoma-San Francisco County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Phase 1	Building Construction	5/11/2019	5/10/2020	5	260	
2	Phase 2	Building Construction	5/11/2020	5/11/2021	5	262	
3	Phase 3	Building Construction	5/12/2021	5/12/2022	5	262	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.61

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Maxwell Farms Regional Park - Sonoma-San Francisco County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Phase 1	Excavators	1	8.00	158	0.38
Phase 1	Generator Sets	1	8.00	84	0.74
Phase 1	Graders	1	8.00	187	0.41
Phase 1	Pavers	1	8.00	130	0.42
Phase 1	Plate Compactors	2	8.00	8	0.43
Phase 1	Pumps	1	8.00	84	0.74
Phase 1	Rubber Tired Loaders	1	8.00	203	0.36
Phase 1	Skid Steer Loaders	1	8.00	65	0.37
Phase 2	Excavators	1	8.00	158	0.38
Phase 2	Generator Sets	1	8.00	84	0.74
Phase 2	Graders	1	8.00	187	0.41
Phase 2	Pavers	1	8.00	130	0.42
Phase 2	Plate Compactors	2	8.00	8	0.43
Phase 2	Pumps	1	8.00	84	0.74
Phase 2	Rubber Tired Loaders	1	8.00	203	0.36
Phase 2	Skid Steer Loaders	1	8.00	65	0.37
Phase 3	Excavators	1	8.00	158	0.38
Phase 3	Generator Sets	1	8.00	84	0.74
Phase 3	Graders	1	8.00	187	0.41
Phase 3	Pavers	1	8.00	130	0.42
Phase 3	Plate Compactors	2	8.00	8	0.43
Phase 3	Pumps	1	8.00	84	0.74
Phase 3	Rubber Tired Loaders	1	8.00	203	0.36
Phase 3	Skid Steer Loaders	1	8.00	65	0.37

Trips and VMT

Maxwell Farms Regional Park - Sonoma-San Francisco County, Winter

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Phase 1	9	20.00	183.00	1,538.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Phase 2	9	20.00	183.00	1,170.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Phase 3	9	20.00	183.00	300.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Phase 1 - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5131	26.4533	18.9971	0.0390		1.1902	1.1902		1.1337	1.1337		3,772.6971	3,772.6971	0.8659		3,794.3437
Total	2.5131	26.4533	18.9971	0.0390		1.1902	1.1902		1.1337	1.1337		3,772.6971	3,772.6971	0.8659		3,794.3437

Maxwell Farms Regional Park - Sonoma-San Francisco County, Winter

3.2 Phase 1 - 2019**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0562	1.9250	0.4080	4.6900e-003	0.1457	9.6400e-003	0.1554	0.0386	9.2300e-003	0.0478		503.5431	503.5431	0.0331		504.3710
Vendor	0.9468	24.2916	6.8848	0.0485	1.2319	0.1913	1.4232	0.3541	0.1830	0.5371		5,154.7036	5,154.7036	0.3617		5,163.7465
Worker	0.1149	0.0866	0.8031	1.6400e-003	0.1643	1.3300e-003	0.1656	0.0436	1.2200e-003	0.0448		162.6446	162.6446	6.7300e-003		162.8128
Total	1.1179	26.3032	8.0959	0.0548	1.5419	0.2023	1.7442	0.4363	0.1935	0.6297		5,820.8913	5,820.8913	0.4016		5,830.9303

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5131	26.4533	18.9971	0.0390		1.1902	1.1902		1.1337	1.1337	0.0000	3,772.6971	3,772.6971	0.8659		3,794.3437
Total	2.5131	26.4533	18.9971	0.0390		1.1902	1.1902		1.1337	1.1337	0.0000	3,772.6971	3,772.6971	0.8659		3,794.3437

Maxwell Farms Regional Park - Sonoma-San Francisco County, Winter

3.2 Phase 1 - 2019**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0562	1.9250	0.4080	4.6900e-003	0.1457	9.6400e-003	0.1554	0.0386	9.2300e-003	0.0478		503.5431	503.5431	0.0331		504.3710
Vendor	0.9468	24.2916	6.8848	0.0485	1.2319	0.1913	1.4232	0.3541	0.1830	0.5371		5,154.7036	5,154.7036	0.3617		5,163.7465
Worker	0.1149	0.0866	0.8031	1.6400e-003	0.1643	1.3300e-003	0.1656	0.0436	1.2200e-003	0.0448		162.6446	162.6446	6.7300e-003		162.8128
Total	1.1179	26.3032	8.0959	0.0548	1.5419	0.2023	1.7442	0.4363	0.1935	0.6297		5,820.8913	5,820.8913	0.4016		5,830.9303

3.2 Phase 1 - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3399	24.5307	18.8951	0.0390		1.0711	1.0711		1.0192	1.0192		3,718.4658	3,718.4658	0.8568		3,739.8867
Total	2.3399	24.5307	18.8951	0.0390		1.0711	1.0711		1.0192	1.0192		3,718.4658	3,718.4658	0.8568		3,739.8867

Maxwell Farms Regional Park - Sonoma-San Francisco County, Winter

3.2 Phase 1 - 2020**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0478	1.7583	0.3704	4.6300e-003	0.2426	6.3000e-003	0.2489	0.0624	6.0300e-003	0.0684		498.3045	498.3045	0.0317		499.0957
Vendor	0.7427	21.9815	5.9376	0.0482	1.2318	0.1185	1.3502	0.3541	0.1133	0.4674		5,128.5129	5,128.5129	0.3318		5,136.8071
Worker	0.1054	0.0767	0.7178	1.5900e-003	0.1643	1.2800e-003	0.1656	0.0436	1.1800e-003	0.0448		157.6252	157.6252	5.8800e-003		157.7722
Total	0.8959	23.8165	7.0259	0.0544	1.6386	0.1260	1.7647	0.4600	0.1205	0.5805		5,784.4426	5,784.4426	0.3693		5,793.6750

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3399	24.5307	18.8951	0.0390		1.0711	1.0711		1.0192	1.0192	0.0000	3,718.4658	3,718.4658	0.8568		3,739.8867
Total	2.3399	24.5307	18.8951	0.0390		1.0711	1.0711		1.0192	1.0192	0.0000	3,718.4658	3,718.4658	0.8568		3,739.8867

Maxwell Farms Regional Park - Sonoma-San Francisco County, Winter

3.2 Phase 1 - 2020**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0478	1.7583	0.3704	4.6300e-003	0.2426	6.3000e-003	0.2489	0.0624	6.0300e-003	0.0684		498.3045	498.3045	0.0317		499.0957
Vendor	0.7427	21.9815	5.9376	0.0482	1.2318	0.1185	1.3502	0.3541	0.1133	0.4674		5,128.5129	5,128.5129	0.3318		5,136.8071
Worker	0.1054	0.0767	0.7178	1.5900e-003	0.1643	1.2800e-003	0.1656	0.0436	1.1800e-003	0.0448		157.6252	157.6252	5.8800e-003		157.7722
Total	0.8959	23.8165	7.0259	0.0544	1.6386	0.1260	1.7647	0.4600	0.1205	0.5805		5,784.4426	5,784.4426	0.3693		5,793.6750

3.3 Phase 2 - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3399	24.5307	18.8951	0.0390		1.0711	1.0711		1.0192	1.0192		3,718.4658	3,718.4658	0.8568		3,739.8867
Total	2.3399	24.5307	18.8951	0.0390		1.0711	1.0711		1.0192	1.0192		3,718.4658	3,718.4658	0.8568		3,739.8867

Maxwell Farms Regional Park - Sonoma-San Francisco County, Winter

3.3 Phase 2 - 2020**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0361	1.3274	0.2797	3.5000e-003	0.1096	4.7600e-003	0.1143	0.0290	4.5500e-003	0.0336		376.1806	376.1806	0.0239		376.7779
Vendor	0.7427	21.9815	5.9376	0.0482	1.2318	0.1185	1.3502	0.3541	0.1133	0.4674		5,128.5129	5,128.5129	0.3318		5,136.8071
Worker	0.1054	0.0767	0.7178	1.5900e-003	0.1643	1.2800e-003	0.1656	0.0436	1.1800e-003	0.0448		157.6252	157.6252	5.8800e-003		157.7722
Total	0.8842	23.3856	6.9351	0.0533	1.5056	0.1245	1.6301	0.4267	0.1191	0.5457		5,662.3187	5,662.3187	0.3615		5,671.3572

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3399	24.5307	18.8951	0.0390		1.0711	1.0711		1.0192	1.0192	0.0000	3,718.4658	3,718.4658	0.8568		3,739.8867
Total	2.3399	24.5307	18.8951	0.0390		1.0711	1.0711		1.0192	1.0192	0.0000	3,718.4658	3,718.4658	0.8568		3,739.8867

Maxwell Farms Regional Park - Sonoma-San Francisco County, Winter

3.3 Phase 2 - 2020**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0361	1.3274	0.2797	3.5000e-003	0.1096	4.7600e-003	0.1143	0.0290	4.5500e-003	0.0336		376.1806	376.1806	0.0239		376.7779
Vendor	0.7427	21.9815	5.9376	0.0482	1.2318	0.1185	1.3502	0.3541	0.1133	0.4674		5,128.5129	5,128.5129	0.3318		5,136.8071
Worker	0.1054	0.0767	0.7178	1.5900e-003	0.1643	1.2800e-003	0.1656	0.0436	1.1800e-003	0.0448		157.6252	157.6252	5.8800e-003		157.7722
Total	0.8842	23.3856	6.9351	0.0533	1.5056	0.1245	1.6301	0.4267	0.1191	0.5457		5,662.3187	5,662.3187	0.3615		5,671.3572

3.3 Phase 2 - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1649	22.4191	18.7787	0.0389		0.9521	0.9521		0.9051	0.9051		3,717.3905	3,717.3905	0.8499		3,738.6383
Total	2.1649	22.4191	18.7787	0.0389		0.9521	0.9521		0.9051	0.9051		3,717.3905	3,717.3905	0.8499		3,738.6383

Maxwell Farms Regional Park - Sonoma-San Francisco County, Winter

3.3 Phase 2 - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0340	1.2209	0.2682	3.4500e-003	0.1844	4.2000e-003	0.1886	0.0474	4.0200e-003	0.0514		371.2257	371.2257	0.0236		371.8164
Vendor	0.6018	19.9229	5.2340	0.0477	1.2316	0.0513	1.2829	0.3540	0.0491	0.4031		5,081.8304	5,081.8304	0.3191		5,089.8066
Worker	0.0978	0.0683	0.6487	1.5300e-003	0.1643	1.2300e-003	0.1655	0.0436	1.1300e-003	0.0447		152.1726	152.1726	5.2300e-003		152.3033
Total	0.7336	21.2121	6.1509	0.0527	1.5803	0.0567	1.6370	0.4450	0.0542	0.4992		5,605.2288	5,605.2288	0.3479		5,613.9263

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1649	22.4191	18.7787	0.0389		0.9521	0.9521		0.9051	0.9051	0.0000	3,717.3905	3,717.3905	0.8499		3,738.6383
Total	2.1649	22.4191	18.7787	0.0389		0.9521	0.9521		0.9051	0.9051	0.0000	3,717.3905	3,717.3905	0.8499		3,738.6383

Maxwell Farms Regional Park - Sonoma-San Francisco County, Winter

3.3 Phase 2 - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0340	1.2209	0.2682	3.4500e-003	0.1844	4.2000e-003	0.1886	0.0474	4.0200e-003	0.0514		371.2257	371.2257	0.0236		371.8164
Vendor	0.6018	19.9229	5.2340	0.0477	1.2316	0.0513	1.2829	0.3540	0.0491	0.4031		5,081.8304	5,081.8304	0.3191		5,089.8066
Worker	0.0978	0.0683	0.6487	1.5300e-003	0.1643	1.2300e-003	0.1655	0.0436	1.1300e-003	0.0447		152.1726	152.1726	5.2300e-003		152.3033
Total	0.7336	21.2121	6.1509	0.0527	1.5803	0.0567	1.6370	0.4450	0.0542	0.4992		5,605.2288	5,605.2288	0.3479		5,613.9263

3.4 Phase 3 - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1649	22.4191	18.7787	0.0389		0.9521	0.9521		0.9051	0.9051		3,717.3905	3,717.3905	0.8499		3,738.6383
Total	2.1649	22.4191	18.7787	0.0389		0.9521	0.9521		0.9051	0.9051		3,717.3905	3,717.3905	0.8499		3,738.6383

Maxwell Farms Regional Park - Sonoma-San Francisco County, Winter

3.4 Phase 3 - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.7200e-003	0.3131	0.0688	8.8000e-004	0.0282	1.0800e-003	0.0293	7.4700e-003	1.0300e-003	8.5000e-003		95.1861	95.1861	6.0600e-003		95.3375
Vendor	0.6018	19.9229	5.2340	0.0477	1.2316	0.0513	1.2829	0.3540	0.0491	0.4031		5,081.8304	5,081.8304	0.3191		5,089.8066
Worker	0.0978	0.0683	0.6487	1.5300e-003	0.1643	1.2300e-003	0.1655	0.0436	1.1300e-003	0.0447		152.1726	152.1726	5.2300e-003		152.3033
Total	0.7083	20.3042	5.9515	0.0501	1.4242	0.0536	1.4778	0.4051	0.0512	0.4563		5,329.1891	5,329.1891	0.3303		5,337.4475

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1649	22.4191	18.7787	0.0389		0.9521	0.9521		0.9051	0.9051	0.0000	3,717.3905	3,717.3905	0.8499		3,738.6383
Total	2.1649	22.4191	18.7787	0.0389		0.9521	0.9521		0.9051	0.9051	0.0000	3,717.3905	3,717.3905	0.8499		3,738.6383

Maxwell Farms Regional Park - Sonoma-San Francisco County, Winter

3.4 Phase 3 - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.7200e-003	0.3131	0.0688	8.8000e-004	0.0282	1.0800e-003	0.0293	7.4700e-003	1.0300e-003	8.5000e-003		95.1861	95.1861	6.0600e-003		95.3375
Vendor	0.6018	19.9229	5.2340	0.0477	1.2316	0.0513	1.2829	0.3540	0.0491	0.4031		5,081.8304	5,081.8304	0.3191		5,089.8066
Worker	0.0978	0.0683	0.6487	1.5300e-003	0.1643	1.2300e-003	0.1655	0.0436	1.1300e-003	0.0447		152.1726	152.1726	5.2300e-003		152.3033
Total	0.7083	20.3042	5.9515	0.0501	1.4242	0.0536	1.4778	0.4051	0.0512	0.4563		5,329.1891	5,329.1891	0.3303		5,337.4475

3.4 Phase 3 - 2022**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9474	19.4867	18.6080	0.0389		0.8109	0.8109		0.7718	0.7718		3,717.6356	3,717.6356	0.8456		3,738.7758
Total	1.9474	19.4867	18.6080	0.0389		0.8109	0.8109		0.7718	0.7718		3,717.6356	3,717.6356	0.8456		3,738.7758

Maxwell Farms Regional Park - Sonoma-San Francisco County, Winter

3.4 Phase 3 - 2022**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.2100e-003	0.2866	0.0660	8.7000e-004	0.0468	9.2000e-004	0.0477	0.0120	8.8000e-004	0.0129		93.8754	93.8754	5.9900e-003		94.0252
Vendor	0.5562	18.9142	4.7989	0.0473	1.2315	0.0447	1.2762	0.3540	0.0427	0.3967		5,033.9163	5,033.9163	0.3111		5,041.6937
Worker	0.0906	0.0607	0.5802	1.4700e-003	0.1643	1.1800e-003	0.1655	0.0436	1.0900e-003	0.0447		146.6052	146.6052	4.6000e-003		146.7201
Total	0.6551	19.2615	5.4451	0.0496	1.4426	0.0468	1.4894	0.4096	0.0447	0.4543		5,274.3968	5,274.3968	0.3217		5,282.4390

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9474	19.4867	18.6080	0.0389		0.8109	0.8109		0.7718	0.7718	0.0000	3,717.6356	3,717.6356	0.8456		3,738.7757
Total	1.9474	19.4867	18.6080	0.0389		0.8109	0.8109		0.7718	0.7718	0.0000	3,717.6356	3,717.6356	0.8456		3,738.7757

Maxwell Farms Regional Park - Sonoma-San Francisco County, Winter

3.4 Phase 3 - 2022**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.2100e-003	0.2866	0.0660	8.7000e-004	0.0468	9.2000e-004	0.0477	0.0120	8.8000e-004	0.0129		93.8754	93.8754	5.9900e-003		94.0252
Vendor	0.5562	18.9142	4.7989	0.0473	1.2315	0.0447	1.2762	0.3540	0.0427	0.3967		5,033.9163	5,033.9163	0.3111		5,041.6937
Worker	0.0906	0.0607	0.5802	1.4700e-003	0.1643	1.1800e-003	0.1655	0.0436	1.0900e-003	0.0447		146.6052	146.6052	4.6000e-003		146.7201
Total	0.6551	19.2615	5.4451	0.0496	1.4426	0.0468	1.4894	0.4096	0.0447	0.4543		5,274.3968	5,274.3968	0.3217		5,282.4390

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

Maxwell Farms Regional Park - Sonoma-San Francisco County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.3046	6.4499	14.9166	0.0374	3.0037	0.0514	3.0551	0.8054	0.0485	0.8539		3,782.059 1	3,782.059 1	0.1880		3,786.758 9
Unmitigated	1.3046	6.4499	14.9166	0.0374	3.0037	0.0514	3.0551	0.8054	0.0485	0.8539		3,782.059 1	3,782.059 1	0.1880		3,786.758 9

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	54.81	659.75	485.46	432,844	432,844
Parking Lot	0.00	0.00	0.00		
Total	54.81	659.75	485.46	432,844	432,844

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.568926	0.041373	0.172015	0.112977	0.030659	0.007080	0.028564	0.025868	0.003029	0.001930	0.005517	0.000872	0.001190
Parking Lot	0.568926	0.041373	0.172015	0.112977	0.030659	0.007080	0.028564	0.025868	0.003029	0.001930	0.005517	0.000872	0.001190

Maxwell Farms Regional Park - Sonoma-San Francisco County, Winter

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Maxwell Farms Regional Park - Sonoma-San Francisco County, Winter

5.2 Energy by Land Use - NaturalGas**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

6.0 Area Detail**6.1 Mitigation Measures Area**

Maxwell Farms Regional Park - Sonoma-San Francisco County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0788	9.0000e-005	9.9700e-003	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0212	0.0212	6.0000e-005		0.0227
Unmitigated	0.0788	9.0000e-005	9.9700e-003	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0212	0.0212	6.0000e-005		0.0227

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.1100e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0747					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	9.4000e-004	9.0000e-005	9.9700e-003	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0212	0.0212	6.0000e-005		0.0227
Total	0.0788	9.0000e-005	9.9700e-003	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0212	0.0212	6.0000e-005		0.0227

Maxwell Farms Regional Park - Sonoma-San Francisco County, Winter

6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.1100e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0747					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	9.4000e-004	9.0000e-005	9.9700e-003	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0212	0.0212	6.0000e-005		0.0227
Total	0.0788	9.0000e-005	9.9700e-003	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0212	0.0212	6.0000e-005		0.0227

7.0 Water Detail**7.1 Mitigation Measures Water****8.0 Waste Detail****8.1 Mitigation Measures Waste****9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment**Fire Pumps and Emergency Generators**

Maxwell Farms Regional Park - Sonoma-San Francisco County, Winter

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

Appendix B

Biological Resources – Special Status Species Potential to Occur

Appendix B. Potential for Special Status Plant and Wildlife Species to Occur in the Project Area.

List compiled from the California Department of Fish and Wildlife (CDFW) Natural Diversity Database (2018), U.S. Fish and Wildlife Service (USFWS) Species Lists (2018), and California Native Plant Society (CNPS) Electronic Inventory (2018) searches of the Glen Ellen, Napa and Sonoma USGS 7.5' quadrangles.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE PROJECT AREA
Plants			
<i>Allium peninsulare</i> var. <i>franciscanum</i> Franciscan onion	Rank 1B.2	Cismontane woodland, valley and foothill grassland; on clay substrate, often derived from serpentine. Elevation range: 170 – 985 feet. Blooms: May – June.	Unlikely. This species is closely associated with rocky clay substrates. The soil within the Project Area is derived from alluvium from mixed parent material.
<i>Amorpha californica</i> var. <i>napensis</i> Napa false indigo	Rank 1B.2	Openings in broadleaf upland forest, chaparral, cismontane woodland. Elevation range: 395 – 6560 feet. Blooms: April – July.	Unlikely. Although the Project Area contains woodland habitats, this species is associated with oak and mixed hardwood woodlands on hillslopes above the elevation of the Project Area.
<i>Astragalus tener</i> var. <i>tener</i> alkali milk-vetch	Rank 1B.2	Alkaline soils, playas, valley and foothill grassland (adobe clay), vernal pools. Elevation range: 30-200 feet. Blooms March – June.	Unlikely. The Project Area does not contain alkaline soils, playas or adobe clay.
<i>Balsamorhiza macrolepis</i> big-scale balsamroot	Rank 1B.2	Valley and foothill grassland, cismontane woodland; sometimes on serpentine substrate. Elevation range: 295 – 3100 feet. Blooms: March – June.	No Potential. This species is closely associated with rocky soils derived from volcanics (basalt, tuff) or serpentine situated in hilly or montane landforms.
<i>Blennosperma bakeri</i> Sonoma sunshine	FE, SE, Rank 1B.1	Vernal pools, vernal swales, and mesic areas in valley grassland; highly restricted to the Santa Rosa Plain and Valley of the Moon. Elevation range: 35 – 360 feet. Blooms: March – April.	No Potential. The Project Area does not contain vernal pool habitat necessary to support this species.
<i>Brodiaea leptandra</i> narrow-anthered California brodiaea	Rank 1B.2	Broadleaf upland forest, chaparral, lower montane coniferous forest. Elevation range: 360 – 3000 feet. Blooms: May – July.	No Potential. The Project Area does not contain substrate derived from volcanic or serpentine, and chaparral and forest habitat in the elevation range is not present.
<i>Ceanothus confusus</i> Rincon Ridge ceanothus	Rank 1B.1	Closed-cone coniferous forest, chaparral, cismontane woodland; known from volcanic and serpentine substrate; typically on dry shrubby slopes. Elevation range: 245 – 3495 feet. Blooms: February – April.	No Potential. The Project Area does not contain chaparral, forest, or foothill woodland habitat at the elevation to support this species. Substrate in the Project Area is not derived from serpentine or volcanic parent material.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE PROJECT AREA
Plants (cont.)			
<i>Ceanothus sonomensis</i> Sonoma ceanothus	Rank 1B.2	Chaparral; located on sandy serpentine or volcanic substrates. Elevation range: 705 – 2625 feet. Blooms: February – April.	No Potential. The Project Area does not contain chaparral habitat necessary to support this species. Substrate in the Project Area is not derived from serpentine or volcanic parent material.
<i>Chorizanthe valida</i> Sonoma spineflower	FE; SE; Rank 1B	Coastal prairie; in sandy soils. Elevation range: 35 – 1000 feet. Blooms: June – August.	No Potential. The Project Area does not contain coastal prairie habitat or sandy soils necessary to support this species.
<i>Downingia pusilla</i> dwarf downingia	Rank 2B.2	Valley and foothill grassland, vernal pools; located in mesic grassy sites, pool and lake margins. Elevation range: 3 – 1450 feet. Blooms: March – May.	Unlikely. Although the Project Area contains seasonal wetlands, this species occurs in wetlands with a longer duration of inundation to preclude the emergence of non-native vegetation.
<i>Erigeron greenei</i> Greene's narrow-leaved daisy		Serpentinite or volcanic chaparral. Elevation range: 600 to 3000 feet. Blooms: May to September.	No Potential. The Project Area lacks serpentinite or volcanic soils and is outside the elevation range of this species.
<i>Extriplex joaquinana</i> San Joaquin spearscale		Chenopod scrub, meadows and seeps, playas and alkaline valley and foothill grassland. Elevation range: 3 to 2700 feet. Blooms: April to October.	Unlikely. Although the Project Area contains meadows and grassland, it lacks playas and alkaline soils favored by this species.
<i>Fritillaria liliacea</i> fragrant fritillary	Rank 1B.2	Coastal scrub, valley and foothill grassland, coastal prairie, cismontane woodland; located in grassy sites underlain by clay, typically derived from volcanics or serpentine. Elevation range: 10 – 1335 feet. Blooms: February – April.	Unlikely. Although the Project Area contains grassland habitat, this species is closely associated with rocky clay soils derived from serpentine or volcanic material which are not present in the Project Area.
<i>Hemizonia congesta ssp. congesta</i> Hayfield tarplant	Rank 1B.2	Coastal scrub, valley and foothill grassland. Elevation range: 65 – 1840 feet. Blooms: April – October.	Moderate Potential. The Project Area contains open grasslands that may support this species. This species is relatively tolerant of disturbance (e.g., mowing, grazing, tilling).
<i>Horkelia tenuiloba</i> thin-lobed horkelia	Rank 1B.2	Broadleaf upland forest, coastal scrub, valley and foothill grassland, chaparral; in mesic openings, on sandy substrate. Elevation range: 165 – 1640 feet. Blooms: May – July.	Unlikely. Although the Project Area contains grassland habitat, this species is closely associated with acidic uplifted marine sands.
<i>Legenere limosa</i> legenere	Rank 1B.2	Vernal pools; typically located in the deepest portions of pools. Elevation range: 3 – 2860 feet. Blooms: April – June.	Unlikely. Although the Project Area contains seasonal wetlands, this species is known from wetlands with a longer duration and deeper inundation period to preclude the emergence of non-native vegetation.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE PROJECT AREA
Plants (cont.)			
<i>Leptosiphon jepsonii</i> Jepson's leptosiphon	Rank 1B.2	Chaparral, cismontane woodland; on open to partially shaded grassy slopes on volcanic or the periphery of serpentine substrate. Elevation range: 330 – 1640 feet. Blooms: April – May.	No Potential. The Project Area does not contain substrate derived from volcanic or serpentine parent material and is outside the elevation range of this species.
<i>Lasthenia conjugens</i> Contra Costa goldfields	FE; Rank 1B.1	Cismontane woodland, alkaline playas, valley and foothill grassland and vernal pools. Elevation range: 0 to 1500 feet. Blooms: March to June.	Unlikely. The Project Area does not contain playa or vernal pool habitat. Grasslands are disturbed and dominated by non-native species.
<i>Lathyrus jepsonii</i> var. <i>jepsonii</i> Delta tule pea	Rank 1B.2	Freshwater and brackish marshes and swamps. Elevation range: 0 to 16 feet. Blooms: May to July.	No Potential. The Project Area does not contain marshes or swamps.
<i>Leptosiphon jepsonii</i> Jepson's leptosiphon	Rank 1B.2	Chaparral and cismontane woodland (usually volcanic). Elevation range: 300 to 1600 feet. Blooms: March to May.	No Potential. The Project Area does not contain chaparral or volcanic soils, and is outside the elevation range of this species.
<i>Lilaeopsis masonii</i> Mason's lilaeopsis	Rank 1B.1	Brackish or freshwater marshes and swamps and riparian scrub. Elevation range: 0 to 30 feet. Blooms April to November.	Unlikely. The Project Area does not contain marshes or swamps, but riparian scrub is present along Sonoma Creek. This species is not described from Sonoma County.
<i>Lupinus sericatus</i> Cobb Mountain lupine	Rank 1B.2	Broadleaf upland forest, chaparral, cismontane woodland, lower montane coniferous forest; typically in stands of knobcone pine-oak woodland or ponderosa pine-California black oak woodland, on open wooded slopes in gravelly substrate, sometimes serpentine. Elevation range: 890 – 4960 feet. Blooms: March – June.	No Potential. The Project Area does not contain foothill woodland, chaparral, or forest habitat necessary to support this species and is outside the elevation range of this species.
<i>Trichostema ruygtii</i> Napa bluecurls	Rank 1B.2	Chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland, and vernal pools. Elevation range: 100 to 2200 feet. Blooms: June to October.	Unlikely. The Project Area does not contain chaparral, coniferous forest, or vernal pools.
<i>Trifolium amoenum</i> two-fork clover	FE; Rank 1B.1	Valley and foothill grasslands, sometimes serpentine soils, swales, coastal bluff scrub. Elevation range: 15 to 1300 feet. Blooms: April to June.	Unlikely. The Project Area does not contain serpentine soils or coastal scrub. No recorded sightings in the vicinity of the Project Area.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE PROJECT AREA
Plants (cont.)			
<i>Trifolium hydrophilum</i> saline clover	Rank 1B.2	Marshes and swamps, mesic valley and foothill grassland, vernal pools. Elevation range: 1 to 1100 feet. Blooms: April to June.	No Potential. The Project Area does not contain suitable marsh or vernal pool habitat, and species is likely extirpated from the area.
<i>Viburnum ellipticum</i> oval-leaved viburnum	Rank 2B.3	Chaparral, cismontane woodland, lower montane coniferous forest. Elevation range: 705 – 4595 feet. Blooms: May – June.	No Potential. Although the Project Area contains woodland habitat, this species is typically located in dense forest, chaparral, or woodland habitat in montane or hillslope settings at high elevations.
Wildlife			
Invertebrates			
<i>Callophrys mossii bayensis</i> San Bruno elfin butterfly	FE	Occurs on north-facing slopes within the fogbelt where its hostplant, stonecrop (<i>Sedum spathulifolium</i>) grows in coastal grassland and low scrub on thin, rocky soils. Known to persist in three locations, all in San Mateo County.	No Potential. Project Area is outside species' known range.
<i>Syncaris pacifica</i> California freshwater shrimp	FE; SE	Low elevation, low gradient, small, perennial coastal streams.	Present. Presumed present in the reach of Sonoma Creek that passes through the Project Area.
Fish			
<i>Hypomesus transpacificus</i> Delta smelt	FT; SE	Occurs in salt or brackish water except during spawning when it migrates upstream to freshwater. Restricted to the Sacramento-San Joaquin Delta from San Pablo Bay upstream through the Delta in Contra Costa, Sacramento, San Joaquin, Solano and Yolo counties.	Unlikely. May rarely occur in the lower reaches of Sonoma Creek, but does not have a population there.
<i>Entosphenus tridentatus</i> Pacific lamprey	SSC	Spawn in habitat similar to that of salmon: gravel bottomed streams at the upstream end of riffle habitat. Young lamprey (ammocoetes) reside in areas of low velocity and fine substrates where they burrow, grow and live as filter feeders for 3 to 7 years before emigrating to the ocean.	Present. Documented by ESA staff in the middle portions of Sonoma Creek in the 1980s.
<i>Oncorhynchus mykiss irideus</i> Steelhead – central California coast DPS	FT	Spawns and rears in coastal streams between the Russian River and Aptos Creek, as well as drainages of the SF and San Pablo Bays, where gravelly substrate and shaded riparian habitat occurs.	Present. Steelhead spawn and rear in upper watershed portions of Sonoma Creek and larger tributaries. Critical habitat for steelhead is present in Sonoma Creek in the Project Area and its tributaries.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE PROJECT AREA
Wildlife (cont.)			
Fish (cont.)			
Coho Salmon - central California coast ESU <i>Oncorhynchus kisutch</i>	FE/SE	Anadromous Pacific salmonid, ranges from Punta Gorda to Aptos, including San Francisco Bay tributaries; requires cold, clear, well-oxygenated streams with gravel substrates.	Unlikely. May stray into Sonoma Creek from migratory routes in coastal drainages and San Pablo Bay.
California coastal Chinook Salmon ESU <i>Oncorhynchus tshawytscha</i>	FT/-	Anadromous Pacific salmonid, ranges from Klamath River to Russian River; requires cold, clear, well-oxygenated streams with gravel substrates.	Not Present. Sonoma Creek is not within the range of this fish.
<i>Spirinchus thaleichthys</i> longfin smelt	Candidate FT; ST; SSC	Occur in the middle or bottom of water column in salt or brackish water. Concentrated in Suisun Bay, Montezuma Slough, and the lower reaches of the Sacramento and San Joaquin Rivers, but may be found throughout San Francisco Bay.	Unlikely. This species mainly occurs in tidal waters of San Pablo Bay, Napa river and the Petaluma River. It may occur in lower, tidal portions of Sonoma Creek.
Amphibians			
<i>Ambystoma californiense</i> California tiger salamander	FT, ST	Wintering sites occur in grasslands occupied by burrowing mammals; breeds in ponds and vernal pools.	No Potential. The project is outside this species' known range.
<i>Dicamptodon ensatus</i> California giant salamander	SSC	Cool, moist, forest habitat (Douglas fir, redwood, red fir, montane, and valley-foothill riparian) associated with rocky streams and springs. Cold and flowing water is necessary for egg-laying sites.	Unlikely. Occurs in redwood and rocky streams, which are not present in the Project Area.
<i>Rana boylei</i> foothill yellow-legged frog	ST Candidate	Rarely occurs far from permanent water. Rocky streams in a variety of habitats (valley-foothill hardwood, valley-foothill hardwood-conifer, valley-foothill riparian, ponderosa pine, mixed conifer, coastal scrub, mixed chaparral, wet meadows)	Unlikely. Occurs in montane streams, which are not present in the Project Area.
<i>Rana draytonii</i> California red-legged frog	FT; SSC	Breeds in stock ponds, pools, and slow-moving streams with emergent vegetation. May move up to 1.3 miles from aquatic breeding habitat.	Low Potential. Has been found in pools in the hills and wetlands 5 miles west and 3 miles south of Sonoma; it is generally not expected in Sonoma Creek, as the swift-moving creek does not provide breeding or summer habitat.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE PROJECT AREA
Wildlife (cont.)			
Amphibians (cont.)			
<i>Taricha rivularis</i> Red-bellied newt	SSC	Streams in proximity to redwood forest but also found in mixed conifer, valley-foothill woodland, montane hardwood, and hardwood-conifer habitats. Range in Sonoma, Mendocino, Humboldt, and Lake cos.	Unlikely. Identified in montane streams, which are not present in the Project Area.
Reptiles			
<i>Actinemys marmorata</i> Western pond turtle	SSC	Freshwater ponds and slow streams edged with sandy soils for laying eggs. Occurs in major creeks and tributary drainages, agricultural ponds with emergent vegetation and sunny basking sites.	Moderate Potential. This species may occur in perennial aquatic habitat of Sonoma Creek, though it lacks suitable slow-moving water for nest habitat.
Birds			
<i>Ammodramus savannarum</i> Grasshopper sparrow	SSC	Dense, dry or well-drained grassland, with mix of grasses and forbs. Uses scattered shrubs for singing perches. Nests in slight depression in ground built out of grasses and forbs at base of clump of grasses.	Unlikely. Although the Project Area contains grassland habitats, they occur in isolated fragments. The density of surrounding development, frequency of disturbance and presence of mammalian predators likely preclude the presence of this species.
<i>Aquila chrysaetos</i> Golden eagle	CFP; BCC	Nests in large trees, snags, and cliffs, winters on lakes and reservoirs.	Unlikely. The Project Area lacks suitable nesting habitat for this species. Eagles may occasionally occur in the area while foraging.
<i>Athene cunicularia</i> Burrowing owl	SSC; BCC	Nests and forages in low-growing grasslands and shrublands with perches and areas that support burrowing mammals.	Unlikely. Although the Project Area contains grassland habitat, the density of surrounding development and frequency of disturbance likely preclude the presence of this species.
<i>Coccyzus americanus occidentalis</i> Western yellow-billed cuckoo	FT; SE; BCC	Prefer open woodlands with clearings and a dense shrub layer. Often found in woodlands near streams, rivers or lakes.	Unlikely. Species is likely extirpated from the area.
<i>Cypseloides niger</i> black swift	SSC; BCC	Nests in moist crevice or cave on sea cliffs above surf, or cliffs behind, or adjacent to waterfalls and deep canyons. Forages widely over many habitats as long as there are suitable nest sites.	Unlikely. The Project Area does not contain suitable cave or cliff nesting habitat for this species. It may occasionally forage over the area.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE PROJECT AREA
Wildlife (cont.)			
Birds (cont.)			
<i>Elanus leucurus</i> white-tailed kite	CFP	Nests in trees adjacent to grasslands, and forages over grasslands and agricultural lands	Unlikely. The Project Area contains limited suitable open foraging land for this species. It may occur in open parts of Maxwell Farms Park.
<i>Geothlypis trichas sinuosa</i> saltmarsh common yellowthroat	SSC; BCC	Found in emergent wetlands in salt or brackish marshes.	No Potential. The Project Area does not contain salt marsh habitat.
<i>Melospiza melodia samuelis</i> San Pablo song sparrow	SSC; BCC	Salt marshes along the north side of S.F. and San Pablo Bays.	No Potential. The Project Area does not contain salt marsh habitat.
<i>Riparia riparia</i> bank swallow	ST	Vertical banks and cliffs with fine-textured or sandy soils near streams, rivers, ponds, lakes and ocean for nesting. Feeds over grassland, shrubland, savannah, and open riparian areas during nesting season.	Unlikely. The Project Area does not contain vertical bank or cliff habitat over the creek. This species may occasionally forage over the Project Area during the wet season.
<i>Strix occidentalis caurina</i> Northern spotted owl	FT	Inhabits dense, mature forests from Canada to California, preferably old growth but also with a mix of older and younger trees.	Unlikely. The Project Area does not contain dense, mature forest habitat used by this species.
Mammals			
<i>Antrozous pallidus</i> pallid bat	SSC	Forages in a variety of habitats. Roosts in caves, crevices, mines, and occasionally hollow trees, and buildings. Prefers cool, mesic areas.	Moderate Potential. This species may use trees or unused buildings in the Project Area for roosting. There is no suitable hibernation habitat.
<i>Myotis thysanodes</i> fringed myotis bat	WBWG	Pinyon-juniper, valley and foothill woodland, and hardwood-conifer habitats at elevation range of 4,000-7,000 feet is optimal habitat; however, can occur in a wider range of habitats. Breeds in caves and old buildings.	Unlikely. This species may use trees in the Project Area for night roosts. There is no suitable maternity or hibernation habitat.
<i>Myotis volans</i> long-legged myotis	WBWG	Forages in chaparral, coastal scrub, early successional woodlands and forests. Roosts in trees (under bark, cavities), snags, buildings, rock crevices, and cliff crevices. Caves and mines are frequently used as night roosts.	Moderate Potential. This species may use trees or unused buildings in the Project Area for roosting. There is no suitable hibernation habitat.
<i>Myotis yumanensis</i> Yuma myotis	WBWG	Commonly occurs along wooded canyon bottoms with sources of water to forage over. Roosts in caves and old buildings.	Unlikely. The Project Area lack canyon bottoms, caves and buildings that are preferred habitat for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE PROJECT AREA
Wildlife (cont.)			
Mammals (cont.)			
<i>Reithrodontomys raviventris</i> Salt marsh harvest mouse	FE	Found in saline emergent wetlands of San Francisco Bay and tributaries.	No Potential. Project Area does not contain tidal marsh habitat.
<i>Taxidea taxus</i> American badger	SSC	Herbaceous communities, scrub, and open states of most habitats with un-saturated, friable soils. Requires substantial prey-base (e.g., ground-nesting birds, other fossorial mammals).	Unlikely. Although the Project Area contains grassland habitats, they occur in isolated fragments. The density of surrounding development and frequency of disturbance likely preclude the presence of this species.

*** Key to status codes:**

FE	Federal Endangered	California Native Plant Society
FT	Federal Threatened	Rank 1A=Plants presumed extinct in California
BCC	USFWS Bird of Conservation Concern	Rank 1B=Plants rare, Threatened, or Endangered in California and elsewhere
SE	State Endangered	Rank 2= Plants rare, Threatened, or Endangered in California but more common elsewhere
SD	State Delisted	Rank 3= Plants about which more information is needed
ST	State Threatened	Rank 4= Plants of limited distribution
SR	State Rare	An extension reflecting the level of threat to each species is appended to each rarity category as follows:
CFP	California Fully Protected Species	.1 – Seriously endangered in California
SSC	State Species of Special Concern	.2 – Fairly endangered in California
WBWG	Western Bat Working Group	.3 – Not very endangered in California

Potential to Occur:

No Potential. Habitat on and adjacent to the site is clearly unsuitable for the species requirements (cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).

Unlikely. Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.

Moderate Potential. Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable.

The species has a moderate probability of being found on the site.

High Potential. All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.

Results and Recommendations:

Present. Species was observed on the site or has been recorded (e.g., CNDDDB, CCH) on the site recently.

Not Present. Species is assumed absent from the site due to a lack of key habitat components.

Not Observed. Species was not observed during surveys of the site.

Presence Unknown: A survey has not been conducted to determine absence or presence of this species.